INTERNATIONAL

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CONTENTS

JUNE 1997 VOLUME 3, NUMBER 2

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June 1997 Volume 3, Number 2

FEATURES

STEWARDSHIP

SCIENCE AND RESEARCH

EDUCATION AND COMMUNICATION

INTERNATIONAL PERSPECTIVES

WILDERNESS DIGEST

Front cover photo of Mount Ruapehu as seen from the Kaimanawa Ranges to the east by Les Molloy. Inset photo of hikers in Westland National Park, New Zealand, by Les Molloy.

International Journal of Wilderness

The *International Journal of Wilderness* links wilderness professionals, scientists, educators, environmentalists, and interested citizens worldwide with a forum for reporting and discussing wilderness ideas and events; inspirational ideas; planning, management, and allocation strategies; education; and research and policy aspects of wilderness stewardship.

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Submissions: Contributions pertinent to wilderness worldwide are solicited, including articles on wilderness planning, management, and allocation strategies; wilderness education, including descriptions of key programs using wilderness for personal growth, therapy, and environmental education; wilderness-related science and research from all disciplines addressing physical, biological, and social aspects of wilderness; and international perspectives describing wilderness worldwide. Articles, commentaries, letters to the editor, photos, book reviews, announcements, and information for the wilderness digest are encouraged. A complete list of manuscript submission guidelines is available from the managing editor.

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WILDERNESS VIGILANCE MORE IMPORTANT THAN EVER

BY JOHN C. HENDEE, MANAGING EDITOR

NOW THAT THE NEW U.S. CONGRESS IS FULLY INSTALLED, we have heard debate on the new federal budget, and a new balance has evolved among competing interests, it's clear that vigilance for wilderness is needed as never before. Wilderness will be impacted by the following aspects: continuing downsizing of the federal government; competition for funding with other worthy environmental programs and less worthy initiatives; political decentralization of authority to state and local levels; administrative threats such as the U.S. Forest Service (USFS) proposal to establish 129 wilderness heliports in Alaska; legislative threats from the 104th Congress such as increasing motorized use of the Boundary Waters Canoe Area, building a road through wilderness to the rim of Hells Canyon, restoring and permanently operating flow regulation dams in the Emigrant Wilderness in California, and amending The Wilderness Act to grant outfitters 20-year permits for reserved campsites and improvements.

Likewise, and perhaps even more so, the threats to wilderness and wildland areas around the globe are increasing dramatically. A significant aspect of *IJW's* mission is to clarify the international issues surrounding wilderness protection and utilization, and to promote better research, management, and legislation to maintain wildland values. These issues are very acute outside of developed nations, as can be seen by the fact that only Zimbabwe (among developing nations) has a form of recognition (on specific communal lands) to recognize and maintain wilderness. Much needs to be done, and quickly, which is a function of the 6th World Wilderness Congress that will convene in India in October 1997 (see *IJW*, vol. 2, no. 1).

To further our international mission, each issue of *IJW* has a focus country or region. For this issue its New Zealand—and what a response we received from our wilderness colleagues down under. Check out the comments by Vance Martin, *IJW*'s international editor (on page 7), to put New Zealand in perspective with other nations that have wilderness legislation. The Kiwis continue to do a tremendous job, with commitment and passion, as evidenced by the fact that we received more (high-quality) submissions from New Zealanders than from any other nationals, besides Americans—and just consider the size difference! As a result, we could not put them all in this issue, which we regret. Fortunately, this enables us to sprinkle the other ones in future issues of *IJW.*

Whether in the United States or New Zealand, Finland or Zimbabwe, to counter the threats to wilderness, the wilderness community needs to be very ecumenical, and reach out to tell the wilderness story to everyone. We need to assure people that the wilderness tent is a large one, with room for bipartisan, local, state, regional, and national and cultural views, including those with differing wilderness interests. While each of us may find plenty to disagree with among the diverse interests in wilderness, we must pull together in our common interest to thwart opponents who would do away with wilderness. Toward that goal *IJW* again reinforces our intention to be a forum for all wilderness interests to express their views.

***IJW* managing editor John Hendee.**

Alan Ewert to Become *IJW* Managing Editor

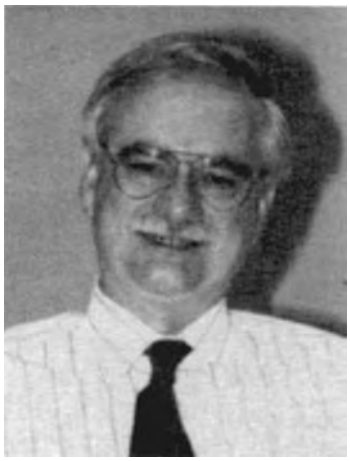
This will be my last column as *IJW* managing editor. Alan Ewert, currently *IJW* executive editor for education, will manage *IJW* content and write this column, at least until the end of vol. 3, no 4. Alan is professor and recreation program chair at the University of Northern British Columbia and has distinguished wilderness credentials as USFS scientist and national wilderness research coordinator, training coordinator for Pacific Crest Outward Bound, professor at Ohio State University, survival instructor for the U.S. Air Force, and the author of Adventure *Education: Concepts and Models.*

Alan's willingness to assume this responsibility will allow me to continue my 1997 sabbatical in California, working for Wilderness Transitions, Inc., where I have been studying the impacts of wilderness-vision questing on peoples lives and also wilderness-related international travel. **IJW**

SOUL OF THE WILDERNESS

One Wilderness, Two Myths, Many Leaders

BY G. JON ROUSH



Article author G. Jon Roush.

THIS IS A CRUCIAL TIME for those who care about wilderness in the United States. For most of the 20th century, we have played by rules that evolved in a nearly straight line. We even helped write many of them. We have learned to use private initiatives and government programs to protect wildlands, and those techniques have come to feel like second nature. Now, although the work is far from finished, the rules are shifting emphatically. The United States is changing course from federal action toward local action, from public toward private action, from solving isolated problems toward managing whole systems. These trends are not just changing the rules; they are changing the game. Two stories illustrate the difference. Each could serve as a cultural myth, embodying a distinct set of values. The first story is well known. Some scholars see it as the beginning of the modern conservation movement in the United States. It is the dramatic fight to save California's Hetch Hetchy valley.

The Tuolomne River flowed out of Yosemite Park through a deep, beautiful valley that Indians had named Hetch Hetchy, describing its grassy meadows. The Tuolumnes waters eventually reach San Francisco Bay. By the late 19th century water had become very important to the people of San Francisco. The privately owned Spring Valley Water Company had been charging San Franciscans high rates for poor service. Mayor James D. Phelan decided to fix that. At his behest, in 1901 Congress passed a bill permitting water conduits through national parks "for domestic, public, or other beneficial uses." Then the city of San Francisco applied to the Interior Department for the rights to Hetch Hetchy's water. Theodore Roosevelt's Secretary of Interior Ethan Hitchcock denied the application. He thought national parks were poor places for public works projects. But another member of the Roosevelt administration had other ideas.

Gifford Pinchot argued that the Hetch Hetchy valley could be dammed without aesthetic harm. John Muir, Yosemite's champion, responded with a letter to his friend Roosevelt, describing the history of prior proposals for Hetch Hetchy dams, all of which, he said, "show forth the proud sort of confidence that comes of a good sound irrefragable ignorance." The battle was joined. It raged on through three administrations and in the national press, until 1913, when President Wilson finally signed a bill approving the dam.

Movements Need Martyrs

The Hetch Hetchy battle was a galvanizing moment for America's young conservation movement. It was one step toward transforming the Sierra Club from a sleepy group of San Francisco hikers into a national force for conservation. It created a national network of conservation groups. It was the first time that the national press paid significant attention to an environmental issue. It inspired rhetoric from which activists like me still borrow. As a classic environmental issue, the Hetch Hetchy battle had everything. It had the archetypal split between Muir and Pinchot: preservation versus multiple use. It pitted conservationists against developers. It also pitted the interests of a local economy against a national interest in conserving public land. And it confirmed a divide between professionals (in this case the city's engineers and consultants) and citizen activists. Through most of the 20th century, those divisions have been the recurring motifs in our national disagreements about natural resources. By now they are so familiar that they seem to have the inevitability of nature, like the division between earth and sky.

Louisiana Black Bear: Conflict Averted

The other story is not nearly so well known as the Hetch Hetchy story, but as an example, it is no less important. It is the story of a conflict that was avoided. It begins in 1990, a century after the opening salvos of the battle of Hetch Hetchy. The U.S. Fish and Wildlife Service (USFWS) received a petition to list the Louisiana black bear as a threatened species. With its habitat range in Louisiana, Mississippi, and east Texas, the bear was in trouble, partly because its habitat was disintegrating. Ninety percent of the Louisiana black bears habitat is on private land, most of it commercial timberland. Many communities in the region depend on that timber for income. People in the region and in the timber industry feared that listing the Louisiana black bear would hurt their economy. On the other hand, the bear is an indicator species for hardwood bottom land ecosystems. Its conservation would also help many other species. Environmentalists were determined to protect the bear, and landowners were determined to protect their rights. The situation had all the makings of another classic environmental showdown. What actually happened did not follow the script. A group of 18 people—representing industry, federal and state agencies, landowners, and conservation groups—started meeting, calling themselves

the Black Bear Conservation Committee (BBCC). They set some important ground rules. They agreed to respect each other, to set aside their personal agendas as much as possible, and whenever possible, to let scientific data and theories be the primary criteria for decisions.

Meanwhile, biologists from the USFWS determined that the bears' habitat needs could be compatible with normal forest practices in the region. The BBCC agreed to some early steps to protect the bears, and those steps allowed the USFWS to delay listing the species, to give the BBCC some time. The Louisiana black bear was finally listed as threatened, but with a provision exempting any unintentional killing as a result of normal logging activities. The Endangered Species Act refers to such unintentional killing as "incidental takings." Since then, the BBCC has enlarged its membership and continued to work on behalf of the bear in issues involving habitat, management, education, research, and funding. They have produced a management handbook for landowners. They have launched a public education campaign to persuade people in the region, especially landowners, that the black bear is an asset. The Endangered Species Act requires that the USFWS draft a recovery plan for the bear. At this time, the BBCC is completing a restoration plan that will be the core of that draft recovery plan.

Two Models for Conflict Settlement

We have here two models for resolving issues of natural resource management. In the Hetch Hetchy model, combatants take positions and slug it out in legislatures and executive offices, in courts, in corporate board rooms, and in the press. Finally, someone with enough public authority makes a decision. The deed is done, case closed, with clear winners and losers. In the BBCC model, the stakeholders don't just influence the process. To a large extent, they are the process, and they are committed to inclusiveness. They look for a solution in which everyone wins. Their goal is to protect the environment and jobs, to address both national and local concerns. They agree to be guided by the best available science, and that agreement helps them rise above personal agendas.

The BBCC was an early example of what have become hundreds, perhaps thousands, of significant efforts for community-based conservation. In the Southeast, Northwest, Sierra Nevadas, and in New England, wherever decisions about wildland are politically polarized, there also have sprung up initiatives to reach consensus through diverse participation. These initiatives vary greatly in strategies and goals, but we can see some common threads. Community-based conservation is typically, but not always, a local or regional phenomenon. Scale is crucial. People close to problems often can see appropriate solutions. Community-based conservation is inclusive. It seeks to involve all stakeholders in defining issues and solutions. It stresses accountability. When decisions are made in full public light, government agencies, elected officials, business executives, and everyone else is accountable for those decisions. In community-based conservation, the emphasis is not on winning but on gaining consensus. People are encouraged to ask not, "Does the decision give me everything I want?" but, "Can I live with it?" This emerging model involves systems-thinking, rather than piecemeal conservation. And it involves decision-making processes in which technical expertise is essential and specialists are not the final arbiters. It seeks not to make choices between economics and the environment, but to meld them. It places more control over decisions in the hands of people who will be most affected by those decisions. It requires that people see themselves as representing shared principles as well as competing interests.

Many of these efforts have one other element in common. Some are not working well, and others have failed, at least for now. Yet that is not a reason to discard the model. It is difficult work under the best of circumstances, and circumstances are rarely the best. The question is, can it produce good decisions? It has much to recommend. It encourages people to address a whole set of connected issues, rather than narrow project-by-project regulation. It generates buy-in from people who will help carry out the decisions, and as a result, it increases certainty Tapping peoples unpredictable creativity, the model encourages innovation. It benefits from the knowledge of people who are close to the problem and have relevant local experience. It also builds trust so that people are better prepared to work together again on other issues.

A Study in the Democratic Process

Having said all that, we still have not answered the question. Does the model produce good decisions? The answer to that question is a definite maybe. If the goal is to produce sustainable systems, the results can be more uncertain. A decision could be perfectly democratic, participatory, and socially equitable, and yet still injure nature. In other cases, consensual models are not appropriate. We can design decision processes to be participatory and equitable only to have them undone by bad faith. The community model does not work when conventional power politics overpower it. Where the stakes are high and consensus is unlikely, we need old-fashioned regulation. Even when consensus is possible, we still often need to promulgate standards, leaving room for communities to negotiate the means to meet those standards.

So the new model is not a panacea. Still, we are gaining enough experience with it to see that it can be a powerful alternative. I believe we can learn from its successes and failures, so that we get better at it. We must learn, because sometimes we have no practical alternative, and even when we do, it squares best with the ethics of democracy.

Three driving forces, three macrotrends, are moving our society toward the new model. The forces are the integration of human and natural systems, a shift toward local action, and a shift toward private solutions. The first force, system integration, may be the big story. The logic is inescapable. To save ecosystems, focus on human communities; to save human communities, focus on ecosystems. An ecosystem conservation strategy must consider the behavior of people in and near the ecosystem. A community development strategy must consider the whole ecological context. This idea, clear and simple as it is, has deep implications for almost every dimension of public policy and private behavior. Whether the model itself is new or old, it is undeniably a new idea to most people in the United States. Applying it to actual situations involves complex

and uncertain assumptions. Especially uncertain are principles that should guide community-based conservation.

Based on the experience of community-based conservation work to date, I think there are five prerequisites for success. A region or community that has these prerequisites has a good chance to integrate natural and human systems. (1) A pre-existing spirit of community. Regions that are experiencing rapid growth have difficulty with community-based conservation, because there are so many newcomers with little or no psychological investment in the place. (2) A locally perceived need. A crisis in the local economy, a polluted river, the threat of federal action, even an inspiring vision for change—whatever the motivation, it must be urgent enough to stir people to set aside their differences and engage in the hard work of conservation. (3) Adequate technical support. People may need G1S capability or help with techniques of visualizing alternative futures. They may need professional facilitators, scientists, or technicians. Many communities do not have those capacities at hand, and they must be able to turn to state or federal agencies. The technical support also can take the form of state or federal standards, which can provide essential guidance for the community. (4) An institutional framework for action. They may need facilitating by public agencies or private organizations, as well as appropriate laws and social customs. These institutions provide the legal and moral authority that will bring people together and enforce decisions. The institutional framework is often weak when the action entails multiple communities within an ecosystem, like a watershed. (5) Leadership. I have saved the most important for last. Someone in the community needs to have the idea, gather the people, and hold them together when the going gets rough. No matter how strong the other community assets, if no one mobilizes them, they will languish.

Leadership Is Key

The key that unlocks it all is leadership, but in the drive for local and private control, leadership is the weak link. To say that is not to denigrate current leaders, local or national, private or public. Existing leadership may be superb but still be in the wrong place. We are decentralizing responsibility to thousands of jurisdictions and private entities. How can we assure that their leaders have the skills and information for this daunting work? We need nothing less than a national cadre of conservation leaders, many in local and private organizations inexperienced in conservation. If successful, they will have all the normal qualities of leadership. They will understand both the small details and the large principles of conservation. They will see solutions to important issues. They will inspire others to work for those solutions.

Can we make the leap to train those leaders? In our democracy, we have 200 years of experience in developing leadership at all levels. We also have a wealth of knowledge about conservation issues and about the skills for pulling people together in a common cause. If we can combine those assets, our communities will have a chance for prosperity, equity, and sustainability all in one package. Without good leadership, nationally, regionally, and locally, we will not do so. Some of the leaders we need will emerge spontaneously Many already have. Yet the need is too great to leave to chance. We need a commitment from educational institutions, government agencies, even corporate training programs, to teach the principles and skills of conservation. We now lack the systems to find, recruit, and train the citizens who can lead the next generation of conservation action. As we hand the work of conservation off to private parties and local communities, developing those systems should be our highest priority. **IJW**

G. Jon Roush is a senior fellow for the Conservation Fund in Washington, D.C. He served as president of The Wilderness Society from 1994-1996. He holds a Ph.D. in English from the University of California-Berkeley. Jon was an assistant professor of literature and humanities at Reed College and a program officer at the Carnegie Corporation of New York. He also worked for The Nature Conservancy, first in the western United States, and then as executive vice president. He can be reached at 2326 20th Street NW, Washington, D.C. 20009, USA. Telephone: (202) 232-0633; e-mail: jonroush@erols.com.

Editor's Note: The *IJW* received such an enthusiastic response from New Zealand to our request for papers that we could not include them all in this issue ... therefore, more to come in the next issue(s). The New Zealand wilderness story is an important example of the critical role played by citizen activists cooperating with government in safeguarding wilderness values.

—Vance G. Martin, Executive Editor

ESTABLISHING A WILDERNESS PRESERVATION SYSTEM IN NEW ZEALAND

A User's Perspective

BY HUGH BARR

NEW ZEALANDERS HAVE ALWAYS CONSIDERED IT THEIR BIRTHRIGHT TO GO TO THE BEACH, climb or ski the mountains, tramp (a New Zealand term for backpacking) the forests and wildlands, hunt for introduced deer, goats, and pigs, and fish the rivers for introduced salmon and trout. We relish the ability to get away from all the stress of civilization, relax in a simpler, natural, and more stress-free environment, and choose our own level of challenge, whether it be climbing, tramping, skiing, or hunting. Access to the backcountry rivers, and beaches is a fundamental component to what New Zealanders see as quality of life and as part of our identity as a fit and free outdoors people.

Cathedral Peaks, Fiordland National Park. The Cathedral Peaks (foreground) is just one of hundreds of mountain ranges in the vast 1.25 million hectare wilderness of Fiordland National Park. The lake in the background is Lake Manapouri, the center of a major controversy during the 1970s when conservationists successfully persuaded the New Zealand government not to raise its level to generate hydro-electricity. Photo by Les Molloy.

A Beautiful but Rugged Land

New Zealand's 27 million hectares (100,000 square miles) makes it about the size of the United Kingdom, or the average U.S. state. This smallness belies the major range of landscapes, climate, and vegetation types. This is because New Zealand is on the edge of two major tectonic plates—the Pacific and Australo-Indian plates (Stevens, et al. 1988). The Southern Alps result from the Australo-Indian plate sliding under the Pacific plate. These Alps rise to over 3,500 meters, the highest peaks in Oceania. New Zealand mirrors the range of climates and landforms of an east-west transect across North America, in only 160 kilometers across the South Island.

New Zealand is separated from the nearest major land mass, Australia, by over 2,000 kilometers. As a small piece of the old southern super continent, Gondwanaland, it has evolved separately for the last 70 million years, with a large range of unique native plant species but almost no mammals.

Because of the tectonic and ice age glacial activity, most mountain areas are young, rugged, and often rapidly eroding. Some 30% of the country is mountain land or steep land forest still in its natural state and is unsuitable for productive use such as pastoral agriculture or timber production. Almost all of these "wildlands" are in public ownership as national or forest parks (15% of New Zealand), protective reserves, or as public conservation land. The philosophy of management of these public wildlands, called the Public Conservation Estate, is one of preservation and protection, not production. Subject to protecting native ecosystems, the public has the right of free entry to enjoy and recreate in these wildlands.

New Zealand was one of the first countries to set up national parks, with the first being initiated in 1887 over the North Islands Tongariro volcanoes. Setting up these parks was a lengthy battle against development interests (Thorn 1987; Burrell 1983). But it has only been during the second half of the 20th century that New Zealand recreational and conservation users realized that if public land was not protected by a nature protection designation, it would be privatized, and cease to be available to all.

Island Lake, Kahurangi National Park. Island Lake is one of many lakes lying in the heart of the Tasman Mountains in Kahurangi National Park. The core of the park is strictly protected as the 96,000-hectare Tasman Wilderness Area, completely devoid of tracks, huts, and mechanical access. Photo by Les Molloy.

New Zealand's Wilderness Ethic

New Zealand has been colonized by humans for only 1,000 years. At first it was by the Polynesian Maori tribes and for the last 225 years also by Europeans. In that time vast changes have been wrought to the native bird life. The giant Moa and giant New Zealand eagle have been exterminated, along with many other bird species. The native forest cover has been removed over 60% of the country, turned initially to grassland farms, with more recently an increasing area being planted in exotic pine for timber.

Since European arrival there has been an ethic of exploration, adventure, and going into the unknown, both for pragmatic reasons of finding grazing land or gold and as recreation for exploring untrodden areas and climbing virgin peaks. The rugged and inaccessible nature of much of the land, coupled with the wet and stormy climate makes such expeditions challenging. (Spearpoint 1996; Crothers 1987).

The Federated Mountain Clubs (FMC) of New Zealand is the national alliance of tramping (backcountry walking), mountaineering, skiing, and deerstalking clubs, with some 15,000 members throughout the country out of a total population of 3.7 million. The FMC is the major advocate for wilderness in New Zealand. In an endeavor to address this confusion over the wilderness concept, the FMC executives concluded in 1960 that there was general and widespread desire by trampers and climbers to have some large undeveloped areas of public wildlands set aside as wilderness areas (Burrell 1983), to give future generations the same opportunities to "pioneer." Consultation with member clubs gave rise to six proposed areas, of which two especially—the Olivines and the Hooker-Landsborough—were designated "Mountaineers Wildernesses." But in spite of forwarding to the minister no progress was made.

Concern continued in the 1970s. It centered on the increase in huts, tracks, and tourist and deer recovery aircraft flights (fixed wing and helicopter) that were diminishing wilderness values (Molloy 1976) and the threat of hydroelectric damming and large-scale mining (Molloy 1983). In 1977 FMC resolved to promote the concept of a "Wilderness Commission" to set up a wilderness system.

Federated Mountain Clubs' 1981 Wilderness Conference

The Federation's landmark 50th Jubilee Wilderness Conference in 1981 (Molloy 1983) proposed 10 major new wilderness areas throughout New Zealand, covering lands that were largely de facto wilderness. But rather than being small, peripheral, uninteresting lands, they were large core areas pioneered and used by the tramping and mountaineering fraternity for their wilderness recreation. Some were up to 100,000 hectares and all were more than 30,000 hectares in extent (Molloy 1983), the total area encompassing 3% of New Zealand.

Wilderness areas are at the difficult end of the Recreation Opportunity Spectrum. Users are, of necessity, more fit, more capable, and more experienced than the average backcountry user who is used to easier terrain, huts, and tracks. Wilderness users need to be fully self-sufficient, able to cope with rugged country, and possess the skills and stamina necessary to carry all their gear and food for at least five days. Skills, such as river-crossing, route-finding in inclement weather and through rough country, glacier travel, snow- and ice-climbing, and survival in storms, are necessary as is the ability to carry a 60-pound (2 5-kilogram) backpack and travel for 10 to 12 hours a day.

Within the 10 wilderness proposals there is, however, a significant gradation of difficulty. Four areas—Kaimanawa, Tasman, Garvies, and Pegasus—are relatively open tramping wildernesses, without glaciers, that are not particularly

New Zealand wilderness advocates have adopted a purer concept of wilderness, often in a more difficult and hostile environment, than their North American colleagues.

About 10% of the population is concerned about conservation land issues. There is broad public sympathy for protecting forests, such as the South Island West Coast beech forests (Searle 1974) and North Island podocarp forests, and in protecting magnificent scenery such as Lake Manapouri from hydroelectric dams (Peat 1995). Because of this, recreation and conservation interests have been able to ensure protection to approximately 28% of the country. Protecting the remaining 3% of predominantly dryland mountain grassland (tussockland) is a current campaign.

difficult outside winter. Another three—Raukumara, Paparoa, and Poteriteri—are more rugged, with occasional difficult rivers, but do not involve glaciers. The final three—Adams, Hooker-Landsborough, and Olivine—are the toughest, with extensive glaciers, very rugged terrain, high passes, and difficult rivers.

The conference made progress because it led to the formation of a Wilderness Advisory Group of both nongovernment officials (NGOs) and departmental officials, which developed a joint wilderness policy and appraised the 10 wilderness area proposals.

Progress: 1982 to Present

The 1984 change of government, and subsequent amalgamation of government backcountry recreation and conservation agencies into a new but underfunded Department of Conservation (DOC), slowed progress toward designation of the FMCs' wilderness areas. Only strong political lobbying led to the designation (gazettal) of the Raukumara and Tasman wildernesses in 1988. The approach of a general election led to the successful gazettal of the Hooker-Landsborough wilderness in 1990.

Lack of DOC funds, and other conservation board and departmental priorities have heretofore stalled progress on the remaining six proposals. This underfunding has been crippling to the departments performance (Barr 1996). By 1996 DOCs staff had been cut to half of that of the agencies it replaced in 1987. But it is now legislatively required to carry out significantly increased responsibilities, and there has been greatly increased use of the estate. DOCs "Visitor Strategy" (Department of Conservation 1996) supports wilderness as part of a Recreation Opportunity Spectrum approach, and the department will seek designation (gazettal) of the remaining five wilderness proposals on the public conservation estate, namely Olivine, Paparoa, Tin Range-Pegasus, Southern Fiordland, and Adams. The 10th proposal, Garvies, is on Crown grazing leases and cannot be considered for wilderness until surrendered from these leases. The DOCs Conservation Management Strategies for Stewart Island and the West Coast (Department of Conservation 1996 [2]) advocate gazettal. These wilderness proposals are generally supported by the tourist industry and not opposed by the main South Island Maori tribe, Ngai Tahu.

Maori Land Claims

The New Zealand government has embarked on a program of compensating Maori tribes for perceived wrongs in government purchases and confiscations of land from tribes, during the establishment of New Zealand as a British Colony from 1840. Up to that time the Maori population had been greatly decreased by intertribal wars, cannibalism, and introduced disease (Evison 1993).

As a primarily stone age, hunter-gatherer society supplemented by some agriculture, most Maori settlement was near the coast, or in the fertile river valleys. There were no permanent settlements in the areas proposed at the FMC conference for wilderness. The lack of productive value of these areas is precisely the reason they have been left alone by Maori and colonial developers alike. They are viewed as wasteland by both cultures. The government and the Ngai Tahu tribe agreed in principle to settle the tribes claim just prior to New Zealand's 1996 general election. This claim concerns the greatest land area of any claim, the lower half of New Zealand. It contains eight wilderness areas, but no actual or proposed wilderness areas are involved in the settlement.

Changing User Perceptions

In recent years New Zealanders have had one of the most capitalistic governments in the Western world. Unemployment has soared, and working hours have increased significantly. Those with jobs have less leisure time, and a consequent desire to use air access or guides, rather than rely on their own efforts and skills (Gabites 1996).

The interests of the New Zealand backcountry user also appear to be changing. The elite are as interested as ever in challenge and feats of endurance. But many now see this as a "man (or woman) conquering nature" short duration fitness challenge, not the more symbiotic and skills-based philosophy of primitive wilderness users (Spearpoint) (Crothers). Two day "Coast to Coast" and "Mountains to the Sea" competitive endurance races are in vogue.

Also, for climbers, there is the lure of South American, Himalayan, and European climbs, as travel is relatively cheaper now than in the past. Hard climbs and transalpine wilderness expeditions still

Mount Ngauruhoe, Tongariro National Park. Mount Ngauruhoe (2,291 meters) is one of the youngest volcanic cones in Tongariro National Park, New Zealand's first national park and the fourth in the world. The international importance of the andesitic volcanoes of the park and the significance of this sacred landscape to the indigenous Maori people (Ngati Tuwharetoa) have been recognized in its World Heritage status. Photo by Les Molloy.

provide vital experience and training just as they did for Sir Edmund Hillary, joint first conqueror of Everest, more than 40 years ago. It is likely that the current reduced activity phase will pass, and New Zealanders will return in greater numbers to enjoy the challenge of their primitive wilderness recreation in the future.

Threats to the Ecosystem

The threat of overdevelopment has vanished with the major reduction in DOC funding. Overseas tourist numbers have more than doubled. This has led to government directives to DOC to "withdraw from the backcountry" (Department of Conservation 1996) and instead provide more services to peripheral users and overseas tourists. This is a major setback for New Zealand backcountry users generally But it removes any threat of overdevelopment of wilderness areas.

The threat of mining will be greatly diminished in the future. Legislation is now being passed banning mining in national parks, as well as in gazetted wilderness areas. The hydroelectric damming threat has diminished, because of the difficulty, remoteness, and expense of most sites, although it will probably reemerge in the future.

The major conflict is that contradiction in terms, Adventure Tourism—guided activities such as white-water rafting, heliskiing, fishing, and hunting, all usually seeking air access. Air access for white-water rafting and tahr hunting are issues in the Hooker-Landsborough wilderness, as are air access for commercial fishing guides to the mid-Karamea river, in the Tasman Wilderness. Heliskiing was a threat on the Ramsay Glacier of the Adams Wilderness (*FMC Bulletin* September 1985). But attractive heliskiing opportunities outside the wilderness area proposal are now being used instead.

Both North Island wilderness proposals, Raukumara and Kaimanawa, face threats of air access by recreational hunters seeking deer and other introduced wild animals. This is presently allowed by the wilderness policy to provide wild animal control. The desire for a primitive wilderness hunting experience is not strong in the North Island, in contrast to the wilderness Wapiti hunters in Fiordland National Park's rugged wildernesses.

Conclusions

The struggle by users and administrators to set up adequate wilderness areas to preserve the challenge of primitive backcountry recreation in New Zealand in perpetuity has been a lengthy rollercoaster ride. But it is nearing completion. New Zealand wilderness advocates have adopted a purer concept of wilderness, often in a more difficult and hostile environment, than their North American colleagues.

Threats to wilderness such as creeping development, overuse, mining, and hydroelectric development have receded, at least for the time being. There is a consensus among users and administrators in favor of designating more wilderness areas, as well as acceptance from Maori and tourism groups.

This is likely to translate into passage of most of FMC's remaining wilderness proposals by the year 2000. If this occurs, New Zealand will have adequately recognized the outstanding and varied wilderness qualities of its natural wildlands, and preserved their major recreational challenge not only for New Zealanders, but for a world in which wilderness is forever diminishing. **IJW**

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WILDERNESS IN NEW ZEALAND

A Policy Searching for Someone to Implement It

BY LES MOLLOY

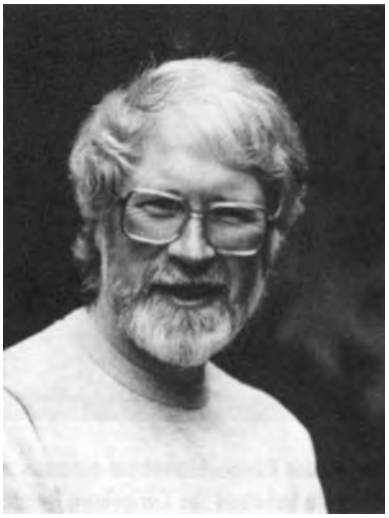
IN 1976 I WROTE THE ARTICLE "WILDERNESS DIMINISHING" for the *New Zealand Alpine Journal* (Molloy 1976), which painted a picture of recreational development sweeping through New Zealand's mountain lands. I lamented the rapid loss of wildness in one of the worlds most remote island groups—islands so ancient in their origins, yet so new in their colonization by humans. It is interesting now, 20 years later, to review what has happened to wilderness in the intervening years, a period of rapid change in the country's social and economic environment, as well as attitudes toward the protection of biodiversity and wildness.

The decade 1976 to 1986 was a time of environmental controversy in New Zealand. Public opposition particularly focused on state-sponsored natural resource exploitation, especially the loss of wild and scenic rivers to hydroelectricity generation, the "Think Big" petrochemical projects in Taranaki, wide-scale loss of wetlands and shrublands through agricultural subsidies, and the nonsustainable milling of indigenous forests. The number of national parks—10 in all—had remained static between 1964 and 1986; there was poor progress in the protection of marine ecosystems; wild, introduced animals were wreaking havoc on New Zealand's unique flora and fauna; and, the overseas tourist boom was just beginning to impinge on the traditional outdoor recreation activities of New Zealanders.

The Beginning of a Wilderness Area System

In 1981 the country's first wilderness conference was organized by the Federated Mountain Clubs (FMC) of New Zealand, a loose federation of approximately 100 mountaineering, bush tramping, and hunting clubs. Subsequently, FMC proposed the establishment of 10 new wilderness areas (Molloy 1983), sufficient to protect about 3% of New Zealand's land area in a completely undeveloped condition.

Interestingly, this initiative did not come from the Green Movement, which was more concerned with the protection of forest, river, tussockland, and coastal natural heritage. Rather, the push for wilderness areas was a response from the outdoor recreation community, concerned about the loss of wildness in New Zealand's most extensive ecosystem, the mountain lands. Because mountains, hill country and steep lands made up more than 70% of New Zealand's land area, they have always been taken for granted, assumed to be still wild, always there, etched in purple on the horizon. Mountain lands also made up the largest proportion of the protected landscapes at that time, the national parks and forest parks. Ironically, the outdoor recreational community, which spent the previous 50 years trying to develop roads, tracks, and huts into the mountains, suddenly became concerned that there would soon be few truly wild places left.



Article author Les Molloy.

The legacy of the wilderness conference was a government-appointed Wilderness Advisory Group (WAG), which spent the next two years developing a wilderness policy (see Figure 1) and evaluating 10 wilderness area proposals endorsed at the conference. Only two of these proposals, Raukumara and Tasman, were advanced through public consultation procedures by the relevant government agencies; both, in fact, lay in forest parks administered by the New Zealand Forest Service (NZFS). On the other hand, the National Parks and Reserves Authority showed little interest, with no further wilderness areas being formed in the national park system for another 15 years. The NZFS had strong philosophical ties to the U.S. Forest Service, with its multiple-use management concepts, and it quickly adopted an American planning approach using the Recreation Opportunity Spectrum as a tool to help provide a wide range of recreational opportunities in state forests.

Mount Ruapehu, Tongariro National Park. Mount Ruapehu (2,797 meters) viewed here from the Kaimanawa Ranges to the east is the highest mountain in the North Island of New Zealand. This ancient volcano erupted spectacularly in September 1995, causing evacuation of the skifields on its slopes. Photo by Les Molloy.

Craigieburn Range. Limestone outcrops mark Castle Hill basin between the Carigeburn Range and Torlesse Range in the Canterbury high country. Sheep graze the rangeland in the foreground, but the snow-covered ranges are protected for soil conservation and are popular winter skifields. Photo by Les Molloy.

The Advent of the Department of Conservation

During a government restructuring in the mid- to late 1980s the NZFS, the Department of Lands and Survey (who administered national parks and reserves), and other land conservation agencies were abolished and replaced by the Department of Conservation (DOC). The legislative provisions for wilderness areas in the National Parks Act and the Reserves Act were now supplemented by similar provisions in the Conservation Act of 1987. With the Forests Act eclipsed by the Conservation Act, the so-called "Conservation Estate" (public lands administered by DOC) now included about 29% of New Zealand, including hundreds of smaller islands of high significance for biodiversity conservation.

Formal wilderness area protection soon became a low priority for DOC in lieu of the protection of threatened habitats in the lowlands (lowland forests, wetlands, estuaries), in the tussockland intermontane basins of Canterbury and Otago, and in the seas covering the continental shelf. Mountain wilderness was considered to be secure, at least in the short term. However, one substantial wilderness area of 41,000 hectares, centered on the Hooker Range and the headwaters of the rugged Landsborough River in South Westland, was established by DOC in 1990.

During the early 1990s, each of DOC's 14 conservancies was required to produce comprehensive Conservation Management Strategies (CMS) after gathering wide public consultation. Essentially, a CMS is a regional statement of the value of places and how they will be managed to protect conservation values, including their value for wilderness recreation. Gradually, the list of potential wilderness areas evaluated by WAG were dusted off and, where viable, incorporated into the CMS as an indication of the departments future management intent.

The Upsurge in Overseas Visitors: The 1996 Visitor Strategy

The public lands and visitor facilities managed by DOC are of vital importance to the tourist industry because they include 2 World Heritage (natural) Sites, 13 national parks, 19 forest parks, and thousands of scenic, nature, scientific, recreational, and marine reserves. The range of visitor facilities within these protected areas is equally impressive: 960 backcountry huts, 250 campsites, more than 11,000 kilometers of tracks (trails), and hundreds of picnic sites, interpreted features of interest, roads, jetties, airstrips, and so on. Many department-managed sites are of prime importance to international visitors—Milford Sound, Mount Cook, the Tasman Glacier, Franz Josef and Fox Glaciers, and the volcanoes of Tongariro National Park. In addition, the department manages the eight "Great Walks"—Milford, Routeburn, Kepler, Rakiura, Lake Waikaremoana, Heaphy, Abel Tasman, and Tongariro Northern Circuit—which contribute most to New Zealand's international reputation for outstanding opportunities for wilderness tramping.

During the decade 1985 to 1995, New Zealand experienced an unprecedented increase in overseas visitors, more than doubling from 0.67 million in 1985 to 1.41 million in 1995—with an almost static domestic population of around 3.5 million. This sharp increase was largely due to intensive marketing of New Zealand's image of "clean, green outdoors," especially by the newly formed New Zealand Tourism Board (NZTB). While this rapid growth in overseas visitors was occurring, DOC (the managers of most of the network of parks and natural attractions that the tourist wanted to see) was experiencing steadily diminishing budgets for managing visitor facilities and services.

The predictable backlash from New Zealanders occurred. The international visitor growth targets set by the NZTB were widely criticized for failing to recognize the extent to which increased visitation would impinge upon traditional wilderness uses. Of particular concern was pressure from the industry for more roads and sightseeing flights through a number of South Island national parks. Many of these proposed mechanical intrusions into formal or de facto wilderness areas include, for example, a "Cascade-Hollyford Road" (beside the Olivine Wilderness Area) in Te Wahipounamu (southwest New Zealand) World Heritage Area, and a "Karamea-Collingwood Road" beside the Tasman Wilderness Area in Kahurangi National Park. Likewise, increases in sightseeing flights in Milford Sound and across the glaciers and peaks of Westland and Mount Cook National Parks impacted on the quiet enjoyment of the parks.

In all of this, DOC tried, with diminishing staff and finances, to protect wilderness values yet also foster appropriate visitor use. The main vehicle for dialog with all interested parties was preparation of a "Visitor Strategy" (Department of Conservation 1996) addressing key issues, such as how many visitor facilities should be provided, to what standard, and at what sites. The strategy proposes allocation of visitor facilities and services (huts, tracks, campsites, visitor centers, visitor publications, etc.) between the frontcountry and backcountry and seven different types of visitor groups.

It is anticipated that many backcountry huts and tracks, with low numbers of backcountry adventurer visitor group users, will no longer be maintained. Over

time, the effect will be for a gradual increase in true wilderness without visitor facilities—the type of landscape sought by another visitor group, the remoteness seeker. At the same time, this strategy places a lot of emphasis upon the need to protect natural quiet, particularly through the restriction of aircraft flying over the backcountry. The strategy commits the department to "seek restrictions on airspace" to "... maintain natural quiet to ensure visitor enjoyment."

The Visitor Strategy further commits DOC to seek designation of the remaining five viable wilderness areas proposed by WAG in the early 1980s:

Olivine (Mount Aspiring National Park) Paparoa (Paparoa Range, adjacent to Paparoa National Park)
Adams (mid-southern Alps, northeast of Westland National Park)
Southern Fiordland (Fiordland National Park)
Tin Range-Pegasus (Stewart Island)

The proposed Olivine Wilderness Area was finally designated in early 1997, having been planned for nearly 20 years. In December 1996, the New Zealand Conservation Authority endorsed DOC's intention to initiate planning procedures during 1997, with a view to eventual designation for the Paparoa and Southern Fiordland wilderness areas.

Conclusions: "Taking Wilderness for Granted"

The evolution of a system of formally protected wilderness areas throughout New Zealand has been a slow process, and is far from complete. The first wilderness—Otehake, 12,000 hectares of mountain and gorge in Arthur's Pass National Park—was designated in 1955; since then, only another six areas meeting the strict criteria of the wilderness policy have been so protected (totaling 400,000 hectares, or about 1.5% of the country's land area). This is only half the area suggested at the 1981 wilderness conference.

New Zealand has an international reputation for its commitment to biodiversity conservation and for the high quality of its parks and other protected areas. Yet, why such modest progress on wilderness area protection over the last

Figure 1—New Zealand's Wilderness Policy

Wilderness Areas will be managed in accordance with the 1985 Wilderness Policy, as follows:

Wilderness areas are wildlands that appear to have been affected only by the forces of nature, with any imprint of human interference substantially unnoticeable. Designated wilderness areas are managed to perpetuate their natural condition.

Tracts of land chosen to be protected as wilderness areas should meet the following criteria:

- They will be large enough to take at least two days by foot travel to traverse.
- They should have clearly defined topographic boundaries and be adequately buffered so as to be unaffected, except in minor ways, by human influences.
- To retain natural wilderness qualities, developments such as huts, tracks, route markers, and bridges are inappropriate; in the few cases where such facilities exist they should be removed or no longer be maintained.
- Adjoining lands should be managed as buffers to assist in the protection of a wilderness area; buffers may contain huts, tracks, and bridges, but these should be few, and vehicle access will be discouraged near the wilderness boundary.
- Wilderness is a fragile resource, susceptible to overuse; while wilderness areas are open to everyone, overuse will be minimized by selecting areas for their remoteness rather than regulating access by permit.
- To ensure the use of wilderness areas at levels compatible with the maintenance of wilderness values, commercial recreation activities may only be undertaken under license or permit.
- Because wilderness areas are places for quiet enjoyment, free from obvious human impact, and require physical endeavor to achieve in full measure the wilderness experience, the use of powered vehicles, boats, or aircraft will not be permitted.
- Horses may be allowed where strong historical links exist and where legislation permits.
- Users of wilderness areas should be self-sufficient and depend on the natural environment for shelter and fuel only if the use of such resources does not detract from the values of the wilderness.
- Logging, roading, hydroelectric development, and all but hand methods of mining are also incompatible.
- Because of the overriding importance of protection of intrinsic natural values and the safety of visitors to wilderness areas, restrictions on air access may be lifted temporarily for management purposes such as search and rescue operations, fire fighting, and control of introduced plants and animals.

Please see **MOLLOY** on page 45.

VISITOR PERCEPTIONS OF LIVESTOCK GRAZING IN FIVE U.S. WILDERNESS AREAS

A Preliminary Assessment

BY LAURA C JOHNSON, GEORGE N. WALLACE, AND JOHN E. MITCHELL

(Peer Reviewed)

Abstract: More than 1,000 visitors to five U.S. Forest Service wilderness areas in the intermountain west were surveyed using on-site interviews and a mail-back questionnaire to determine both site-specific and general perceptions about livestock grazing in designated wilderness and on public lands in general. The proportion of visitors who accepted livestock grazing in wilderness (43%) was similar to the proportion who considered grazing to be unacceptable (40%). Three-quarters of those who accepted grazing, however, predicated their approval on proper management to protect rangeland ecosystems. A majority of the wilderness visitors surveyed reported that direct encounters and livestock impacts detract from a wilderness experience. Results describe the types of impacts that were perceived and the relative acceptability of different types of encounters. Wilderness visitors were more tolerant of grazing on nonwilderness public lands if properly managed to protect ecosystems.

THE WILDERNESS ACT OF 1964 ALLOWS LIVESTOCK GRAZING TO CONTINUE where it existed prior to the designation of an area as wilderness. Congress further clarified its position through the grazing guidelines of the Colorado Wilderness Act of 1980, which stated that livestock grazing could not be curtailed because of wilderness designation. Thus, barring a change in law and congressional policy, grazing will continue to be allowed in many existing and newly designated wilderness areas (McLaran 1990). Grazing now occurs in more than 35% of U.S. wilderness areas (Reed, et al. 1988) and this is likely to increase as the mid- and lower elevation Bureau of Land Management wilderness roadless areas are added to the wilderness system. So, managers in the United States, and perhaps even more frequently in other countries (MacKinnon, et al. 1986), must accommodate livestock grazing while simultaneously protecting wilderness values. An understanding of the perceptions and beliefs of wilderness visitors about livestock grazing can help managers, grazing permittees, and all users cooperate to improve both grazing management and communication toward those goals.

Cattle were most frequently seen on trails, in meadows and near lakes and streams.

Existing Social Science Research

Increasing public awareness of environmental problems has resulted in growing support for environmental protection and a shift toward ecosystem management on public lands (Dunlap 1991; Brown and Harris 1992). All resource managers must now be increasingly sensitive to broader viewpoints, the social values held by various publics, and their perceptions about particular management actions (Brunson 1992).

Research on perceptions of grazing in wilderness is limited, but began in 1949 when the Legislative Reference Service surveyed land management and conservation organizations to measure support for federal wilderness preservation and public sentiment on wilderness uses including grazing. They found qualified acceptance for grazing as a nonconforming use "only by sufferance and with a view to its eventual elimination" (Keyser 1949). In a study of visitor perceptions of wilderness recreational carrying capacity, Stankey (1973) found definitions of crowding that included references to environmental factors, such as littering, excessive use levels, and damage associated from grazing, noting that a majority of visitors were opposed to corrals for pack stock in wilderness. Wells (1995) reviewed

articles in popular media on public lands grazing and found that critics and proponents alike typically present positions that are highly polarized.

Brunson and Steel (1994) conducted a national survey to identify public attitudes about federal rangeland management. They found that the public believed overgrazing and poor water quality due to livestock impacts continued to be problems on rangelands. Further, a majority of the respondents supported the establishment of more rangeland wilderness areas but did not support livestock grazing in wilderness.

An on-site study conducted in Oregon examined the effect of grazing intensity on scenic quality (Sanderson, et al. 1986). National forest visitors evaluated photographs of three types of landscapes (mountain grasslands, meadows, and forests) under three types of grazing management. While visitors gave high preference ratings to landscapes under all three types of grazing management, preference ratings decreased as grazing intensity increased.

Wallace, et. al (1996) surveyed national forest visitors about their perceptions of livestock grazing on public lands and described specific types of livestock encounters or evidence that detracted from visitor experiences (e. g., cows near camp, manure on the trail, cows or impacts near streams, etc.) Other types of livestock encounters added to the recreational experiences of many visitors (calves with mothers, cattle in the distance, cowboys moving cattle, etc.). Visitors in dispersed campsites were more critical of livestock grazing than were visitors in developed campgrounds (Mitchell, et al. 1996). The study also examined 10 associated issues that the literature associates with livestock grazing, such as range condition, conflicts with wildlife, and conflicts with recreation, and found that the biophysical impacts of grazing were more objectionable than were the social impacts. The majority of visitors approved of grazing on public lands but also predicated their support for grazing on improving range conditions and riparian areas and reducing conflicts with other users.

The present study extends this line of research by examining wilderness visitor perceptions and beliefs about livestock grazing in designated wilderness to (1) describe the effects of various aspects of livestock grazing on wilderness visitor experiences; (2) describe the overall position held by wilderness visitors regarding livestock grazing in wilderness and on public lands; and (3) evaluate the importance of various subissues related to livestock grazing for wilderness visitors.

Article coauthors George Wallace and Laura Johnson.

Methodology

Five USDA Forest Service wilderness areas with ongoing interaction between livestock and visitors were selected for study, the first four in Colorado and the last one in Utah: Weminuche (San Juan National Forest [NF]), West Elk (Gunnison NF), Uncompahgre (Uncompahgre NF), Flat Tops (White River NF), and High Uintas (Wasatch-Cache and Ashley NFs). While they are not intended to be representative of the entire National Wilderness Preservation System (NWPS) they are typical of the more than seventy upper-elevation wilderness areas found in the intermountain west.

Estimated visitor use ranges from 70,000 visitor days per year in the West Elk Wilderness to 233,000 in the Weminuche Wilderness. The livestock grazing allotments in these wilderness areas were designated for either cattle and horses, or sheep and goats. They were judged by area range conservationists as having satisfactory health or at least "good" overall range condition—even though some localized impacts were evident. Livestock were typically brought to the allotments during late June to mid-July and were taken off in September or October. The period of highest recreation visitor use in the study areas also corresponded with the presence of livestock.

The sampling frame comprised national forest wilderness visitors present in any of the five study sites during July, August, and early September 1994, stratified by weekend/weekday and by early, middle, and late summer. Trailheads with moderate- to high-use levels, registration boxes, and a likelihood that visitors would encounter livestock during their

Table 1: Wilderness visitor agreement with position statements regarding livestock grazing in wilderness.

Position statement	Wilderness visitors, *n = 586* Percent (%) Agree
Grazing in this wilderness, as it is now managed, is acceptable. Numbers of livestock and grazing fees should be kept at current levels.	11
Grazing in this wilderness is acceptable as long as management continues to improve the range condition; protection of streams, lakes, and native flora and fauna, and reduces conflicts with other users. Adjustments in livestock numbers and management may be necessary.	32
Grazing is not an acceptable use of this wilderness. It degrades the land, favors livestock over wildlife, is not cost-effective, and conflicts with other uses.	40
I do not know enough about grazing in this wilderness and therefore cannot make a fair judgment about any of the positions stated above.	17

Table 2: Wilderness visitor evaluations of encounters that affect the visitor experience.

Wilderness visitors, *n* = 577

	Detracts Percent (%)	Neutral Percent (%)	Adds Percent (%)
Other visitors	54	32	14
Rangers	7	42	51
Cowboys with cattle	63	24	13
Anglers/hunters	37	47	16
Backpackers	13	55	32
Outfitters	65	28	7
Wildlife	<1	<1	99
Cattle	68	22	10
Sheep	66	23	11
Dogs	48	40	12
Horses/mules	51	34	15
Other packstock	45	44	11

visit were selected for sampling. A combination of mail-back surveys and interviews were used to gather information. (Readers interested in sampling details and data analysis procedures should contact the authors).

Results

All visitors who were approached agreed either to complete an interview or to take a mail-back survey form. A total of 1,035 full-length mail-back surveys were distributed and 487 returned for a response rate of 47%. Of the 121 interviewed, 50 returned the mail-back portion (containing only sociodemographic items and nonsite specific questions about grazing), resulting in a response rate of 41% for the shortened mail-back survey. When the 121 interviewees were combined with the 487 mail-back-only respondents (all those survey items that tested site-specific perceptions were found on both the interview and mail-back-only surveys), there were 608 respondents for a response rate of 53%. Site-specific items comprised the major portion of the survey.

Table 3: Wilderness visitor evaluations of types of livestock encounters that affect the visitor experience.

Wilderness visitors, *n* = 580

Type of livestock encounter	Detracts Percent (%)	Neutral Percent (%)	Adds Percent (%)
In the distance	54	31	15
In or near camp	87	9	4
In riparian areas	82	12	6
On or near trails	78	16	6
In meadows	63	25	12
Cowboys	47	37	16
Sheep herders	51	36	13
Manure in camp	88	12	<1
Tracks in riparian areas	69	25	6
Trampled areas	76	21	3
Tracks on trails	62	34	4
Young livestock with mothers	52	30	18
Odors	75	23	2
Livestock sounds	63	29	8
Fences	74	24	2
Salt	58	39	3
Tanks	66	30	4
Corrals	69	27	4
Evidence of predator control	68	28	4

Site-Specific Perceptions

Wilderness visitors answered three open-ended questions before learning that the study focused on livestock grazing. When asked to identify anything that interfered with their wilderness visit, 38% said "nothing interfered" while 62% perceived some type of interference with their visit. The most frequently cited interference was from other visitors (18%), including crowding (11%), litter (3%), and inappropriate behavior (4%). Others who felt that something interfered with their visit attributed the problem to livestock (15%), citing direct encounters (12%) and related impacts such as manure (3%) or horses (5%).

A second open-ended question asked respondents to describe any negative impacts to the environment that they had observed, and their causes. Fifty percent of the respondents failed to mention noticing any negative impacts to the environment, but of those visitors who did notice impacts, 19% (of all visitors) attributed them to human activities, citing litter (11%), fire rings (3%), inappropriate behavior (3%), and crowding (2%) as impacts. Seventeen percent of all respondents attributed negative impacts to livestock, mentioning overgrazing (6%), manure (4%), trail erosion (4%), and poor water quality (2%), among others.

The third open-ended question asked what changes in management, if any, visitors thought should occur. Many respondents did not specify any preferred changes for the wilderness area that they visited (48%). Notable, however were the (16%) who recommended changes in livestock management, including eliminating livestock (12%), and some suggested reducing livestock numbers and concentrations (4%). Other visitors (15%) suggested changes in visitor management including trail improvements (9%), limiting visitor numbers in wilderness (8%), changing behavior of visitors through education or enforcement (5%), or zoning areas or trails for different uses (2%).

These open-ended questions were followed by items specifically related to

livestock grazing. Most visitors (53%) had no expectations regarding the number of livestock encounters they would experience, about a fourth did not expect to encounter livestock, and the rest expected to have between one and five encounters with livestock. These expectations did not vary according to the number of days visitors had spent in wilderness during their trip. People expecting to see livestock were less likely to report that livestock-related impacts interfered with their enjoyment than were those not expecting to see livestock ($p < .05$). Forty-one percent of the respondents saw livestock and most of those had between one and five encounters (36%). Livestock were seen most frequently in meadows (32%), near lakes and streams (26%), and on trails (26%). Fewer respondents reported seeing livestock in campsites (12%).

Respondents were asked to choose from among three position statements about livestock grazing in the area that they visited (see Table 1). Only 11% of the respondents accepted grazing in wilderness as it is currently managed. Thirty-two percent of those surveyed accepted grazing in wilderness contingent on the proper management of rangeland ecosystems, but 40% felt that livestock grazing in wilderness was unacceptable because of environmental impacts and conflicts with other uses. Approximately 17% of those surveyed felt that they did not know enough about grazing in wilderness to choose a position on the issue. Notably, visitors expecting to see livestock were much more likely to accept grazing in wilderness as practiced or contingent on the improvement of management practices than were those not expecting to see livestock ($p < .01$).

General Perceptions and Effects on the Visitor Experience

Visitors then evaluated the degree to which 12 types of encounters affect a wilderness experience (see Table 2). Approximately two-thirds reported that direct encounters with livestock detract from a wilderness experience. Many also cited encounters with outfitters (65%), cowboys (63%), other visitors (54%), horses (51%), and dogs (48%) as detracting from a wilderness experience.

Respondents also rated the effect of various types of livestock encounters, impacts, and structures on the wilderness experience (see Table 3). For many visitors, all livestock encounters and related impacts and structures listed detracted from the wilderness experience but some clearly more often than others. Noticeable detractors were manure in campsites (88%), livestock encounters in camp (87%), livestock near streams and lakes (82%), and on or near trails (78%). Seeing areas where livestock congregate (76%) and manure on trails (78%) also detract from a wilderness experience for most visitors. Seeing young livestock with mothers (52%), and seeing sheep herders (51%), and cowboys (47%) detract from a wilderness experience for about half of the respondents. Respondents who did not rate livestock encounters and related structures as detracting from a wilderness experience tended to rate them as neutral rather than as enhancing an experience.

Encounters with livestock near riparian areas detracted highly (from visitor enjoyment).

Perceptions about Livestock Grazing

In general, wilderness visitors were more tolerant of livestock grazing on public lands than they were about grazing in designated wilderness (see Table 4). Only 12% agreed that grazing on public lands under current policy is acceptable but most (57%) felt that grazing on public lands is acceptable if properly managed to protect rangeland ecosystems. Twenty percent chose the position that grazing on public lands is unacceptable, while the remainder (12%) did not know enough about the issue to choose a position.

Many respondents indicated that livestock grazing is completely unacceptable in wilderness.

When asked in an open-ended question what they perceived were indicators of proper management, the most frequent responses were healthy-looking and tall vegetation (18%), an area that does not appear overgrazed (9%), healthy riparian areas (4%), appropriate stocking rates (5%), a natural balance in the ecosystem (5%), and a rotational grazing system (3%). The most frequently cited indicators of improper allotment management were overgrazing (25%), impacted or short vegetation (14%), erosion (14%), too much manure (9%), bare soil (7%), trampling (5%), and overstocking (4%).

Ten subissues related to grazing on public lands were all assigned some degree of importance by wilderness visitors (see Table 5). The ranking of these subissues according to the mean importance scores shows that three of the four most important issues relate to biophysical effects (e.g., impacts on fragile lands, range condition, impacts on wildlife). Wilderness visitors also considered compatibility between livestock grazing and recreation to be one of the most important subissues. Issues such as protecting the ranching way of life, the importance of public versus private lands for livestock production, and the economic benefits

Table 4: Wilderness visitor agreement with position statements regarding livestock grazing on public lands.

Wilderness visitors *n = 572*

Position statement	Percent (%)
Grazing on public lands under current policy is acceptable. Numbers of livestock and fees should be kept at current levels to allow ranchers to make a living.	12
Grazing is acceptable if management is improved to ensure good range condition, to protect riparian areas, and reduce conflicts with others. Adjustments in livestock management may be necessary.	56
Grazing is not an acceptable use of most public land. It degrades the land, favors livestock over wildlife, is not cost-effective, and conflicts with other uses.	20
I do not know enough about grazing fees or stocking rates to make a fair judgment about any of the position statements.	12

of livestock production were rated lower in importance, though they still held some importance in forming the respondents' overall attitude or position on public lands grazing.

Discussion: Implications for Wilderness Managers

This study reveals that many wilderness visitors currently find grazing unacceptable in wilderness or acceptable only with improved management. Our findings also suggest that certain actions by managers and livestock permittees might lessen the unacceptability of livestock grazing to wilderness visitors and, in some cases, increase the protection of wilderness resources. For example, social indicators and visitor standards for wilderness conditions might be incorporated into grazing management plans, along with biophysical indicators of range conditions, with the goal of making livestock grazing more acceptable to wilderness visitors. Ivy, Stewart, and Lue (1992) and Wells (1995) have discussed the importance of addressing both situational (on-site variables) and dispositional (preconceived beliefs and expectations) factors in order to reduce conflict and increase tolerance among wilderness users, managers, and livestock producers.

Table 5: Wilderness visitor mean-importance rankings of livestock grazing subissues.

Issue	Wilderness Visitors
	Mean
1) Concern that sensitive rangelands should not be grazed.	4.47
2) Extent of overgrazing and ability to restore public lands to good condition.	4.37
3) Compatibility of livestock grazing and recreation.	4.23
4) Whether or not grazing conflicts with wildlife or reduces wildlife habitat.	4.19
5) The fairness of federal grazing fees and criteria used to judge fees.	4.11
6) Grazing in designated wilderness.	4.07
7) The relative importance of ranches as buffers for public lands management compared to other land uses.	3.96
8) Economic benefits provided to local communities by livestock operations vs. other types of development.	3.66
9) The relative importance of public vs. private lands for livestock production.	3.61
10) Protecting the western ranching tradition and way of life.	3.50

Visitors were asked to choose on a five point Likert scale from "strongly agree" to "strongly disagree" how important each of 20 subissue statements were in forming their overall attitude or position on public lands grazing. Two delph-tested statements from each of the above categories were included.

Situational Factors

Situational factors include those on-site aspects of livestock grazing and management that affect the wilderness visitor experience, some of which can be managed. Encountering livestock or livestock-related impacts on trails, at campsites, or in riparian areas detracts from a wilderness experience for a large proportion of visitors. Over three-quarters of those interviewed indicated that livestock encounters near lakes and streams detract from a wilderness experience, yet they frequently did encounter livestock in riparian areas. Management practices that minimize the amount of time livestock spend near riparian areas would address these concerns.

Results show that livestock seen in the distance impact visitors considerably less than livestock encounters close to visitor use areas. Findings also indicate that the presence of cowboys or sheep herders detracts far less than encountering livestock in high-use or riparian areas. This suggests that grazing will be more acceptable to wilderness visitors if riders are used often enough to prevent cattle from congregating and to keep them away from visitor-use areas. While sheep are not dispersed in the same way as cattle, herders do have control over band location and could make a concerted effort to avoid popular visitor-use areas. Careful placement of salt, drift fences, and water improvements can complement efforts to disperse livestock away from visitor-use areas. Managing herd characteristics over time can change distribution, decrease the use of riparian areas, and otherwise make grazing more compatible with visitation (Howery et al. 1995; Scott, et al. 1996; Roth, et al. 1983).

Livestock can be moved near trailheads and along trails on weekdays or during periods of low visitor use. The dispersal and handling of livestock

around specific visitor-use areas should also be addressed in allotment management plans. In all cases, there should be a good deal more communication between wilderness managers and range conservationists.

Findings indicate that wilderness visitors are also concerned about the biophysical impacts that livestock grazing has on ecosystem health. Three of the four grazing subissues that were assigned the highest importance by wilderness visitors addressed biophysical impacts. One-third said they would accept grazing in wilderness if management continues to improve range condition and protect rangeland ecosystems. Range managers could protect natural conditions in wilderness by carefully managing riparian areas and fragile lands to reduce impacts. Grazing management in wilderness could also focus on achieving natural vegetative communities rather than vegetative communities with the highest possible forage value. Since it is not easy for most visitors to judge factors associated with range condition, such as percent utilization, natural erosion rates, species composition, and so forth, and since approval is linked to improvements in grazing management or range condition for many, such improvements should be interpreted for wilderness users. Wilderness users are often characterized by their high levels of education and a concern for the wilderness resource (Lucas 1990; Roggenbuck and Lucas, 1987), and are typically receptive to such information (Lucas, 1990 [2]). Although much of this type of education will be best conducted off-site, wilderness ranger contacts and trailhead bulletin boards can be utilized for this type of interpretation on-site.

Dispositional Factors

Improving on-site grazing management and interpretation alone may not change visitor perceptions and beliefs about grazing in wilderness. Dispositional factors, including visitor expectations about livestock encounters, knowledge about the origins of legal but nonconforming uses in wilderness, and the relationship between grazing allotments and the future of nearby private ranch lands, should also be addressed carefully over time by managers. Many visitors either had no pretrip expectations about encountering livestock or had expected to see no livestock at all. Those who did expect to see livestock, however, perceived fewer impacts and were less likely to choose a position flatly opposing grazing in wilderness. Numerous studies link expectations to satisfaction (Manning 1986). Thus, managers should inform the public about grazing, thereby reducing the number of visitors with false expectations about the presence of livestock in wilderness areas with grazing allotments.

If livestock are to be moved through visitor-use areas or along frequently used routes, visitor pretrip information becomes especially important. Wilderness users can be informed about which trails go through grazing allotments. Backcountry trail selector brochures describing trail attributes (i.e., use levels and scenery) have been successfully used in Yellowstone National Park to redistribute visitor use (Krumpe and Brown 1982). Wilderness trail selectors could be developed, which include information about livestock grazing and other nonconforming uses in trail or area attribute descriptions. This would also allow visitors who prefer to avoid livestock to choose areas and routes where they are less likely to encounter livestock or to visit portions of wilderness areas that do not have grazing allotments.

Many respondents indicated that livestock grazing is completely unacceptable in wilderness. Conflicts between these visitors and livestock might be lessened if visitors are exposed to information that explains the nonconforming use compromises that were necessary to achieve the passage of The Wilderness Act and the formation of the NWPS. Off-site educational efforts might include displays, videos, and published materials that revisit the history of The 1964 Wilderness Act and The 1980 Colorado Wilderness Act.

Community-based conservation is an increasingly accepted strategy among international wildland managers and environmental nongovernmental organizations (NGOs) that work to win the support of local people living next to protected areas. When such support is achieved, they propose, it is local people and traditional land uses that becomes a buffer against the encroachment of more intense and less desirable development (Elliot 1996; IUCN 1995; MacKinnon, et al., 1986). Knight, et al. (1995) point out the interdependence of ranch based properties and public land grazing allotments. In the United States we are just beginning to apply this concept and have been slow to see ranchers, Native Americans, and other nearby traditional rural residents as "local people" whose support we need to protect wilderness from the impacts associated with unprecedented subdivision and development in the rual intermountain west (Reibsame, et al. 1996).

This study reveals that many wilderness visitors currently find grazing unacceptable in wilderness or acceptable only with improved management.

Although biophysical conditions were important to wilderness visitors, many visitors judged appropriate range condition and allotment management largely by the appearance and length of vegetation on an allotment. These and other open-ended responses indicate that many users do not understand other ecologically based criteria utilized in the field of range-land science. It would, therefore, be useful to incorporate explanations of range condition and rangeland management techniques into off-site or near-site interpretive programs where they may be treated more adequately than at a trailhead or during a brief encounter. It may also be especially important to be honest

about substandard range conditions where they occur and that are in the process of being improved.

Future Research

Future research should consider testing for changes in wilderness visitor perceptions of grazing after management actions have been taken to improve livestock-visitor interactions and/or range condition. Other studies might compare perceptions about livestock grazing among visitors to wilderness and other nonwilderness area settings. Finally, both biophysical and social research are needed to support grazing management in achieving natural vegetative communities while minimizing visitor impacts in wilderness where grazing occurs. **IJW**

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ADVENTURE RECREATION AND ITS IMPLICATIONS FOR WILDERNESS

BY ALAN W. EWERT AND STEVEN J. HOUENHORST

(Peer Reviewed)

Abstract: A number of increasingly popular adventure recreation activities, including rock climbing, mountaineering, and remote-area trekking often take place in wilderness. This paper discusses the current status, trends, economic impacts, ecological implications, and future management challenges facing wilderness managers who must respond to adventure recreation in wilderness.

THE GROWTH OF LEISURE ENDEAVORS THAT INHERENTLY CONTAIN ELEMENTS OF DANGER to the participant has coincided with the increase in wilderness visitation worldwide. As the popularity of adventure recreation grows, there will be increased pressure exerted on the wilderness resource by this expanding number of adventure seekers. In this article, we compare and contrast the theoretical foundations of the wilderness and adventure experience. The adventure recreation phenomenon is then described from the perspective of current status, trends, and economic impacts, and what implications and future management challenges face the wilderness manager who must respond to these new pressures.

Defining the Wilderness and Adventure Recreation Experiences

Like other wilderness experiences, adventure recreation activities are essentially nonutilitarian and provide intense, positive, intrinsically enjoyable experiences to participants (Arnould and Price 1993). Concepts that characterize the nature of both experiences include extraordinary experience (Abrahams 1986; Arnould and Price 1993), flow (Csikszentimihalyi 1975, 1990), and the Adventure Model (Ewert and Hollenhorst 1989, 1994). Embodied in these concepts are the experiential qualities of clear focus and extreme concentration; merging of action and awareness; spontaneity of action; personal control and awareness of power; intense enjoyment; and perhaps transcendence of self as congruency is found between the challenges inherent in the activity and ones abilities to respond competently to those challenges. Going beyond the traditional set of benefits ascribed to leisure experiences (e.g., physical exercise), adventure and wilderness experiences have both been described as a means to crystallize selfhood through personal testing, provide life meaning and perspective, confer awareness of one's own mortality, reduce anxiety, and improve fear-coping mechanisms (Arnould and Price 1993; Abrahams 1986; Ewert 1988; Ewert and Hollenhorst 1989).

Article coauthors Alan W. Ewert (right) and Steve J. Hollenhorst (left), taking a break on top. Photo by A. W. Ewert.

Despite the similarities between the wilderness and adventure recreation experience, there are some important differences. In order to understand these similarities and differences, one must look at the interplay of two factors under each experience form. These factors are (1) risk, danger, and uncertainty, and (2) interaction with the natural environment.

Risk, Danger, and Uncertainty

Adventure recreation can be defined as: "Recreational activities that contain structural components of real or perceived danger and usually involve a natural environment setting in which the outcome is uncertain but influenced by the participant."

Apparent from this definition, adventure recreation involves activities such as mountaineering, rock climbing, scuba diving, backcountry skiing, whitewater boating, and spelunking. Activities that have more recently appeared on the risk recreational scene include snowboarding, play-boating,

Table 1: Influencing Factors and Their Implications.

Influencing Factors	Overall Effect	Implications
Demographic Variables	Generally mixed and variable	Changes in participation patterns
Spatial Distribution	Regional and locality levels will produce differential use patterns	Overall increases with more population exposure to areas offering risk recreation opportunities
Participation in outdoor	Slowing growth rates for some outdoor recreation activities but continued overall growth	Continued growth in risk recreation through increased exposure and information
Technological Innovations	Increases in participation	Research unclear but will involve less experienced participants who place a greater dependency and reliance on technical equipment and materials

sailboarding, cave-diving, rapids swimming (aka "bull-frogging"), and helihiking.

Such experiences are catalysed by several factors, the first of which is the purposeful inclusion of elements of risk or danger (Ewert and Hollenhorst 1994). The risk or danger may be either perceived (i.e., apparent to the participant but not really present) or real (i.e., actual injury or death might occur and in some situations have a substantial probability of occurring). Close proximity to danger tends to heighten concentration and adds consequence to individual decision making. A related factor is the concept of "uncertainty of outcome." In contrast to the chance probabilities inherent in gambling, this uncertainty can be influenced by skills and actions of the participant. Chance occurrences such as bad weather and falling rock are attenuated by the decisions of the recreationist. Competent response to this uncertainty requires appropriate actions and intense concentration, both of which contain the potential of leading to extraordinary experiences.

Risk and uncertainty also accompany many types of wilderness experiences, but, unlike adventure recreation, they are not necessary antecedents to the experience. Indeed, it is not difficult to imagine wilderness experiences somewhat devoid of danger and uncertainty This is a critical distinction: risk and danger are requisite components to the adventure experience, but are only accessory to many types of wilderness experiences.

Interaction with the Natural Environment

A critical element in both adventure and wilderness experiences is interaction with the natural environment. Remote and natural settings imply less availability of outside aid and corresponding increases in the need for self-sufficiency, leading to a heightened sense of consequence and awareness.

An important difference between the two concepts is that while interaction with pristine natural environments is generally considered a prerequisite to satisfying wilderness experiences, such interactions are only accessory to many adventure recreation experiences. In fact, adventure experiences are commonly pursued in relatively developed or urban settings. Examples include Whitewater boating through urban areas, rock climbing on crags located adjacent to roadways and parking lots, or ice climbing in quarry sites.

Indoor activities such as climbing walls and ropes courses, while valuable for training and expression of physical talent, not only lack in naturalness, but also cause exposure to noncontrived risk, danger, and uncertainty. Such activities could be considered "threshold" adventure recreation experiences that may lead to or prepare participants for greater levels of involvement, including activities in wilderness. Thus, the offering of outdoor and indoor adventure activities may ultimately lead to an increase of wilderness activity. Given this interplay between the wilderness and adventure concepts, it may be important for the wilderness manager to be cognizant of the current trends and issues facing adventure.

Variables Influencing Adventure Recreation

There are a number of variables that influence participation in adventure recreation including demographics, location of population, participation trends, and technological innovations. The effect of these variables is summarized in Table 1.

Demographic Variables

Because of the physical demands, increasing age will generally serve to reduce participation in adventure recreation (Marcin 1993). Older adults, however, may substitute many of their current adventure recreation activities for other less demanding adventure endeavours. For example, mountaineering may be replaced by mountain-walking or engaged in at easier, less-challenging levels. Second, technology may serve to offset age by offering equipment that is lighter, more multifunctional, and provides for a higher level of safety. Third, population subgroups may have different expectations relative to activities and participation. For example, Miller (1995) points out that the children of the baby boomers born between 1978 and 1995 (i.e., "echo-boomers") will form an age cohort of 73 million and will begin to impact the number of households aged 24 to 34 around the turn of the century. Thus, a new influx of potential adventure recreation participants will be emerging in the next five years.

Younger participants are already impacting adventure recreation by pushing the extreme edge of various activities,

Table 2: Projected Growth in Outdoor Recreation.

Activity	1993 Number of Participants	Projected Growth 1989–2000	Projected Growth 2000–2040
Wildlife-Related	76.5 million	16%	74%
Camping (Developed)	47.1 million	16%	77%
Hiking (Day)	22.7 million	31%	193%
Backpacking	10.4 million	34%	155%

such as the new breed of kayakers who have abandoned traditional whitewater rivers to perform first descents of extremely difficult and dangerous "steep creeks." The same phenomenon is bringing revolutionary change to other adventure activities such as mountaineering and rock climbing.

Changing family structures will impact adventure recreation in two ways. First, the increase in single-parent families will probably reduce participation in adventure recreation by decreasing the amount of available time, disposable income, and opportunity awareness.

Second, family engagements in adventure recreation, as already observed in a number of adventure recreation activities such as rock climbing and Whitewater canoeing, will be increased. From an adventure travel perspective, family engagements involve the following statistical breakdown, beginning with spouses (58%), children and grandchildren (36%), and parents or grandparents (11%) (TIA 1994).

Third, changes in race and ethnic composition suggest that an increasing proportion of younger potential participants will be nonwhite. Since adventure recreation has traditionally been associated with white participants, the effect of this change is relatively unknown. More important influences to participation may be associated with available opportunities, disposable income, discretionary time, and age (Murdock, Backman, Hoque, and Ellis 1991).

Distribution of the Population

Population distribution impacts participation in two ways: (1) regional shifts and (2) movement from urban to suburban/rural locations. In the first case, regional shifts will involve movement to the South and West (Wetrogan 1988). Increases in adventure recreation participation can be expected because of increased exposure to traditional adventure activities such as mountaineering.

Movement from urban areas to suburban and rural locations may serve to disrupt areas previously used for adventure recreation activities, by the emergence of housing tracts and other development activities. This trend will be more amplified with the micromovement of people, as predicted by Lessinger (1987), from suburbia to nearby open spaces. In response, advocacy groups such as the climbing community's Access Fund have formed with the purpose of ensuring access to climbing areas is maintained despite development pressure.

Popularity of Adventure Recreation

There continues to be growth in outdoor recreation participation (ORCA 1993), although at a slower rate than in the 1960s and 1970s. Substantial increases, however, are predicted in the next several decades. A sample of some of these increases in outdoor recreation activities are listed in Table 2 (ORCA 1993). While some increase in adventure recreation participation can be directly linked to participation patterns in more traditional outdoor recreation activities, such as day-hiking versus wilderness camping, the real connection lies in the growing public acceptance of all forms of outdoor recreational activities as legitimate forms of leisure pursuits. Ultimately what this implies is an overall lessening of the belief that adventure activities are only for the "daredevil" and "reckless." Rather, adventure recreation is increasingly seen as an alternative to the more traditional forms of leisure expression as portrayed through outdoor recreation.

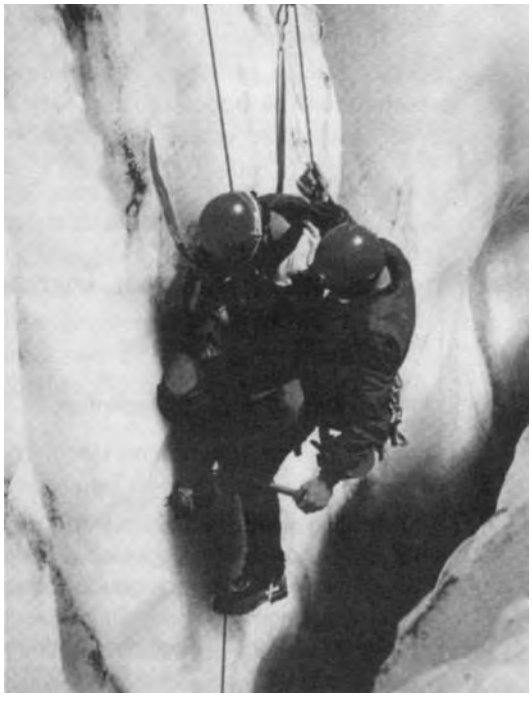
Technological Innovations

Bengston and Xu (1993) report a number of changes in outdoor recreation from technological innovations including:

- New recreation markets and activities (e.g., cave-diving)
- Increased diversity and quality in equipment
- Opportunities for "new" or inexperienced users (e.g., Global Positioning Devices)
- Reductions in environmental impacts

Innovations in technology will result in dramatic increases in adventure recreation participation, primarily for three reasons. First, technology such as lightweight equipment has increased the ease of access to many adventure recreation sites. Second, technological innovations have enhanced the ability of the participant to deal with dangerous events or environments. Improvements in clothing and equipment, such as climbing ropes, have increased the margin of safety. Technological innovations for some participants, however, will create an "illusion of safety." For example, hand-held global positioning devices can provide navigational information but not knowledge or safety about travel

Limiting or restricting access because the setting presents a dangerous situation overlooks the fact that risk and danger are the raison d'etre of the activity.



A crevasse rescue exercise. Photo by A. W. Ewert.

Table 3: Percent of Population of Selected Countries Reporting Participation in Adventure Recreation at Least One Time Per Year.

Country/ Activity	United States	Canada	Britain	France	Germany	Australia	Japan
Mountain Climbing	6.8	4.7	16.6	4.2	7.6	5.5	8.1
Scuba/ Skindiving	3	2.9	1.5	2.1	4	5.6	1.8
Hangliding/ Paragliding	1.1	0.9	0.9	0.2	0.8	1.1	0.1
Camping	23.5	34	13.6	18.7	9.8	27.8	7
Hiking	18	32.3	11.3	27.3	36.7	16.6	11.5

Adapted from the Leisure Development Center. 1991. Leisure and Recreational Activities in Japan.

in rough or impassable terrain. Technology will also serve to increase the types and diversity of participation by providing for different experiences and accommodating differing levels of skill. Examples of this diversification through technological changes include mountain biking, snowboarding, hang-gliding, and heliskiing/hiking.

Third, technology will play an important role in providing information about potential opportunities, safety, costs, and other valuable knowledge components (Coates 1992). This information explosion will apply to all forms of tourism including adventure travel and other similar endeavors (e.g., ecotour-ism). The input and output of this information will become increasingly sophisticated as adventure recreators become more experienced and knowledgeable. Providing for these "information bundles" will create a market niche for companies and consulting groups capable of understanding the adventure recreation experience and the information needs of these participants.

Figure 1—Major Trends in Adventure Recreation

Variable	Trends	Implications
Internal Regulation	Accreditation	Licensure Certifications Equipment/Procedures
Risk Management/ Liability Concerns	Reduction in Cases in the United States Increases in Canada	Bonding, Pay for Services, SAR Higher Percentage of Accidents Personal Assumption of Risk
Market	Reduction in Weight "User Friendly"	Emphasis on Service, "Green Marketing" "Selectable Danger" Family Orientation Teaching Adults in Specialty Courses

Global Participation Patterns

The continued globalization of the world economy, combined with the growth of the alternative travel component of the international tourism industry, will have a positive influence on adventure participation. Indeed, adventure recreation activities have enjoyed substantial and continued support throughout the world, particularly in North America, parts of Europe, Eurasia, and in the coastal areas of South America and Japan. From a global perspective, the overall popularity of adventure recreation is shown in Table 3.

As can be seen, there is substantial variance in participation levels as a function of country and activity. Even acknowledging this variance, however, adventure recreation activities represent important recreational endeavors for significant segments of each population.

Major Trends and Implications

Major trends within the field of adventure recreation include efforts toward internal regulation, growing concern over risk management and liability, diversification of activities, and issues related to markets and delivery of opportunities (see Figure 1).

Internal Regulation

Programs, instructors, and commonly used techniques, such as belaying procedures, will become more standardized and subject to "peer review." Moreover, the accreditation and licensing of individuals and programs according to some accepted set of procedures, such as the peer practices through the Association of Experiential Education, the American Mountain Guide, and International Mountain Guide Association certifications, will become widely accepted. This change has already occurred in Europe and Canada where certified mountain guides have become the norm.

Risk Management/ Liability Concerns

Overall, there will be a continued and increasing need for insurance for both programs and individuals, and insurance

schemes will be complemented by the use of bonding and pay-for-services in the event of search and rescue or need for medical attention with programs increasingly opting for "personal assumption of risk" protocols. This approach will lead to varying degrees of "protection" dependent on overall risk management planning (Hanna 1991).

Diversification and Specialization of Activities

Increased diversification has led to exponential growth in the number of adventure experience types. For example, increasing specialization in mountaineering has resulted in spinoff activities such as: ice climbing, rock climbing, sport climbing, big wall climbing, backcountry skiing, extreme skiing, telemarking, and snowboarding and whitewater boating, with activities such as Whitewater canoeing, kayaking, rafting, inflatable kayaking, rodeo boating, squirt boating, and steep creeking.

The American wilderness system has often been criticized as containing mostly "rock and ice," and this means that some of the most spectacular mountaineering in the United States can be found within wilderness. This is in stark contrast to the Alps where most peaks are accessible by train or cable car. Mountaineering and other climbing-related wilderness use continues to grow. For example, climbers of Mount McKinley in Denali National Park, Alaska, increased from 935 in 1991 to 1,200 in 1994 (American Alpine Journal, 1991-1994). Diversification includes the quest for speed ascents and especially new, previously unclimbed routes. Media coverage of climbing deaths on Mount Everest appear to have actually increased business for adventure travel providers.

Diversification within wilderness recreation happens at slower rates than in adventure recreation because wilderness recreation is steeped in tradition, mores, and normative codes that have a stabilizing affect on change. In contrast, adventure recreationists often tend to reject tradition and behavior norms in favor of unique and novel experiences. The tendency of adventure seekers to disregard wilderness norms and etiquette (e.g., using bolts on rock climbs) poses a tremendous challenge for wilderness managers charged with protecting those traditions.

High altitude wild country brings special challenges. Photo by A. W. Ewert.

Marketing the Adventure Mystique

Market-related issues revolve around three components: (1) addressing the different "images" held by potential consumers of adventure recreation activities and equipment; (2) developing equipment and training packages suitable for specific targeted groups; and (3) emphasizing service and opportunities. As can be seen in Figure 1, program designs such as "family orientations," "green marketing" (i.e., environmentally friendly programs), and specialty courses are increasingly popular.

In studying commercial whitewater rafting, Arnould and Price (1993) identify three organizing themes associated with satisfying adventure experiences: (1) opportunity for communion or connection with nature; (2) opportunity to build community and connect with others outside of one's normal circles; and (3) opportunity for extension and renewal of self.

Use of adventure recreation images to evoke these archetypal themes is common in the marketing of a diverse amount of services and products. While it seems paradoxical to link adventure recreations promise of renewed self with automobile sales, award-winning advertisers have done just that (Arnould and Price 1993), which thereby may also increase demand for adventure recreation services.

Wilderness Management and Research Challenges

Wilderness management implications for adventure recreation includes, first, limiting or restricting access. But since risk and danger are the raison d'etre for adventure recreation "safeguarding participants," either physical modification of the resource or limitation of access will diminish or even destroy the very attraction of the setting.

Second, since adventure recreationists have a spectrum of preferences ranging from pristine remote wilderness on one end to "activity focused" experiences on the other (where a pristine remote setting is superfluous to the experience), providing nonwilderness adventure settings may be a means of reducing pressure on wilderness.

Third, adventure recreation is coming under increasing criticism for environmental degradation, such as from placement of permanent anchor bolts by rock climbers, and devegetation, soil compaction, and erosion on steep approach trails used by mountain climbers.

Other issues include search and rescue policy and funding, the development of partnerships between managing agencies, and a growing diversity of specific

interest groups, in addition to how to preserve both wilderness and adventure recreation experiences under growing use. For example, should adventure guidebooks be curtailed or restructured to preserve both natural conditions and the social/psychological atmosphere?

From a research perspective several issues seem important for study. What is behind the attraction of risk-taking experiences? Is participation in an adventure recreation experience a result of personality factors, such as sensation-seeking, or from some other attributes, such as setting and opportunity (Bromiley and Curley 1992)? Are adventure recreation benefits substantially different from wilderness recreation benefits? What factors influence participation patterns in adventure recreation? Are these patterns predictable?

In Conclusion

While adventure recreation and wilderness experiences are often closely interrelated, the adventure recreation generally involves a deliberate seeking-out of risk and danger and may or may not be wilderness dependent. One cannot assume that adventure recreationists automatically require a wilderness setting or that participants are even wilderness advocates. Indeed, access to suitable locations for adventure recreation may be more important to some adventure seekers than the presence of wilderness.

Participation in adventure recreation activities is expected to continue to grow at a faster rate than other outdoor activities (ORCA 1993), and this growth will become a more important issue for wilderness managers as participants seek greater access to wilderness locations. A better understanding of wilderness visitors seeking adventure and risk in their wilderness outings will be helpful in developing a reasoned response to the adventure phenomenon in protecting wilderness. **IJW**

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PERCEPTIONS OF INTERNATIONAL VISITORS TO NEW ZEALAND WILDERNESS

BY JAMES HIGHAM

Abstract: This paper presents results from a recent study of the wilderness perceptions of international visitors to New Zealand. International visitors to New Zealand have experienced record growth in the last decade, and visitors and patterns of demand for tourist experiences are evolving. Once focused exclusively on accessible locations or "key sites," tourist demand now focuses increasingly on backcountry locations offering wilderness experiences. This situation poses the immediate threat of recreational impact upon areas designated primarily for conservation.

THE NEW ZEALAND TOURISM INDUSTRY has experienced uninterrupted growth in international visitor arrivals since the mid-1960s (Statistics New Zealand 1995), and during the last decade a growth of 8-14% per annum. During this time frame the New Zealand Tourism Board (NZTB) has maintained a marketing focus in order to achieve foreign exchange and employment, with a target goal of 3 million visitors per annum by early in the next millennium. Currently New Zealand hosts approximately 1.5 million international visitors. This period of rapid growth has coincided with the emergence of ecotourism, and it is no surprise when one considers that New Zealand's greatest tourist resource is its extensive system of national parks and reserves.

While the NZTB succeeds in attracting international tourists in increasing numbers, demands upon New Zealand's protected area system have also increased. Called the conservation estate, this system covers more than one-third of New Zealand's mainland area as well as marine parks, sub-Antarctic Islands and Antarctic claims. It includes all of New Zealand's national parks and much of New Zealand's designated wilderness.

The evolution of tourist preferences includes a shift in demand from the concentrated use of a small number of highly accessible and closely managed key sites (e.g., Milford Sound, Mount Cook, and the Westland Glaciers), toward the increasingly dispersed use of less accessible natural areas. O'Neill and Kearsley (1994) propose that pressure on wilderness recreation resources has intensified more than increasing inbound tourist arrivals alone would indicate. While inbound tourism increases at the rate of 8-14% per annum, an increasing proportion of these tourists seek to experience qualities of wilderness during their visit. Tourists, while still visiting the key sites, are increasingly looking beyond these high-profile attractions to wilderness settings and to visiting them too.

The Perceptual Approach to Wilderness Management

Kliskey and Kearsley (1993) note that ecotourists seek"... natural environments and wild places and, as their numbers have grown, so too has pressure upon wilderness resources." However, the management of wilderness recreation is complex (Dubos 1974; Tuan 1974), with growing needs to appreciate the wilderness perception of visitors. The term "wilderness" can be used as either an adjective or noun (Nash 1982), and this has led to growing attention in the field of wilderness perception imagery (Kearsley 1983; Lesslie and Taylor 1985; Shultis 1991; Kliskey 1992). Shultis and Kearsley (1990) recognize that natural environments are "... perceived, evaluated, and interpreted by the brain." It is therefore apparent, as Gresham (1983) explains, that "wilderness experience is not confined to wilderness areas." In light of these points, Davison (1983) places heavy emphasis upon the need for an appreciation of wilderness perceptions and values, drawing attention to subsets of the recreation population who may hold quite distinct perceptions of wilderness. These perceptions are likely to be reflected in the demands and preferences associated with the notion of wilderness recreation.

Lake Waikaremoana, Te Urewere National Park. This remote lake lies high in the Huiarau Range, the largest forested wilderness left in the North Island. Photo by Les Molloy.

Table 1: Responses to Listed Wilderness Perception Variables (%).

Variable list	Unacceptable 1	2	3	4	Acceptable 5	Mean (1.0-5.0)
Search and rescue operations	4.0	3.1	16.6	21.2	49.1	4.3
Distant from towns and cities	4.0	6.7	19.8	22.6	45.1	4.0
Swing bridges/ walkwires over rivers or streams	5.2	6.8	21.8	28.3	36.9	3.9
Restricted group size	10.5	9.5	16.6	24.9	33.5	3.8
Restricted access to prevent crowding	10.5	8.0	17.5	25.2	34.2	3.8
Big enough to take at least two days to walk across	8.9	6.8	18.8	24.3	39.4	3.8
Water provided in huts	14.3	7.9	17.7	22.3	36.9	3.6
Maintained huts and shelters	9.5	11.0	22.7	27.9	26.4	3.6
Toilet facilities	14.0	8.5	18.6	22.9	34.5	3.6
Exotic plants/ trees (pines, thistles and foxgloves)	11.2	11.6	20.4	20.7	33.4	3.6
Signposts/ information	7.0	12.8	24.8	24.5	29.4	3.6
Road access to the start of track	12.5	11.6	27.1	22.0	25.0	3.4
Maintained tracks (e.g. tracks cleared of fallen trees)	13.1	18.3	21.7	27.2	18.0	3.2
Developed camping sites	20.2	14.4	25.2	24.2	14.1	3.0
Grazing of stock (cattle, sheep)	31.2	15.9	25.7	11.9	11.3	2.7
Gas provided in huts for cooking	33.7	16.7	21.3	10.3	16.7	2.6
Stocking of animals and fish not native to NZ	40.1	20.7	21.0	4.6	7.7	2.4
Hunting/ trapping	38.6	18.8	21.9	9.3	8.0	2.4
Motorised transport (powered vehicles, boats)	44.9	22.5	15.7	6.2	8.3	2.2
Plantation logging/ Mining / Hydro development	52.8	18.1	16.6	4.3	4.0	2.0
Commercial recreation (e.g. guided tours)	52.7	20.1	13.1	5.5	6.4	2.0

Wilderness Perception Scaling

Wilderness perception scaling in the New Zealand context has been the subject of academic attention since the late 1970s (Wilson 1979; Kearsley 1983; Shultis 1991; Kliskey 1992). This sequence of research confirms that"... many environmental contexts are acceptable as wilderness depending on the imagery and the attitudes of the visitor" (Kearsley, 1990). Research conducted by Shultis (1991) and Kliskey (1992) included the development and mapping of a purism scale that "represents a gradient of perception levels based on backcountry users' personal concepts of what constitutes a wilderness setting" (Kliskey 1992). These research programs confirm that wilderness perceptions are subjective. Wilderness perceptions may be a function of social and cultural conditioning as well as individual preference and experience (Stankey and Schreyer 1987; Kearsley 1990). It is probable, therefore, that inbound tourists to New Zealand, from a diversity of national, social, ethnic, and cultural settings, bring an equally diverse range of wilderness preferences to recreational settings in this country. Thus, an appreciation of the qualities of wilderness experience sought by international visitors would seem relevant to the management of wilderness recreation resources in New Zealand.

Research Methods

This study applied wilderness perception scaling to international visitors to wilderness settings in New Zealand, a specialized survey instrument (Higham 1996). A questionnaire was designed, pilot tested, and administered at a range of selected backcountry locations, employing the cluster sampling method. The questionnaire was designed to minimize written responses and was translated fully or in part into four languages. Questionnaires were personally delivered to 465 international tourists on twelve tracks of varying remoteness, facility development, and use intensity A response rate of 72.3% generated a sample frame of 336 respondents representing twenty nationalities. (Readers interested in sampling and statistical details should contact the author.)

Dimensions of Wilderness Imagery: Nonpurists to Purists

A list of 21 variables addressing various qualities of wilderness experience was developed drawing on previous research (Brown and Haas 1980; Shultis 1991) and personal experience. The use of a five-point Likert scale afforded tourists the opportunity to express the degree to which listed variables were considered appropriate or inappropriate to wilderness recreation settings (see Table 1).

The middle ground nationals who were predominantly "neutral" or "moderate purists," proved to be Continental Europeans, namely Swiss, German, Dutch, and Austrian. The most purist perceptions of wilderness were held by North Americans, Britons, and Australians. Gender and levels of educational achievement proved to have little bearing on the wilderness purism of these international visitors. The extent to which visitors had backcountry experience was also related to the purism scores with first time, occasional, and regular backcountry recreationists achieving different mean purism scores (2.36, 2.63, and 2.91 respectively). Indeed 57.2% of nonpurists were first time trampers, while 58.3% of strong purists were regular trampers. The association between increasing recreational experience and strong purism provides clear supporting evidence of research conducted by Vaske, Donnelly, and Heberlein (1980); Schreyer, Lime, and Williams (1984); Kearsley (1990) and Bourassa (1991).

Table 2: The Classification of International Tourists within the Wilderness Purism Scale.

Perception level	Purism class	Purism score	Frequency*	Percent of sample
1	Non-purist	82-105	14	4.4
2	Neutralist	67-81	92	28.7
3	Moderate purist	52-66	144	45.0
4	Strong purist	21-51	70	21.9

* Sixteen sample units provided insufficient response to variables listed in this question to be included in wilderness purism scaling analysis.

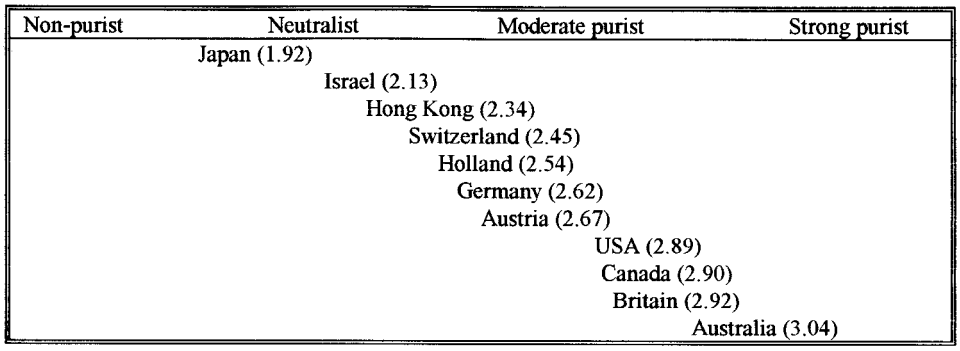
Discussion

Since it is well established that wilderness perceptions are shaped by cultural and sociological factors (Stankey and Schreyer 1987; Kearsley 1990) it is no surprise that international visitors to New Zealand fall into a wide range of wilderness purism classes, and that class membership is positively correlated with nationality. This information affords the opportunity to project international visitor demand for recreation resources offering qualities of wilderness experience based on visitor statistics and tourism forecasts as published by the NZTB. For example, it is apparent that Asian visitors generally hold nonpurist perceptions of wilderness. As such, these visitors are likely to seek certain qualities of wilderness experience (e.g., naturalness and scenery) in a relatively safe and humanized natural setting (e.g., with search and rescue services and a high level of facility development provided). Continental European visitors occupy the middle range of the spectrum and are most likely to hold neutralist or moderate purist perceptions of wilderness. This perhaps suggests that they seek locations of moderate remoteness and naturalness with some level of facilities. North American, British, and Australian visitors are those who exhibit the strongest purism. In relative terms then, these tourists seem most likely to seek the least humanized wilderness settings.

Conclusion

This study confirmed that international visitor perceptions of wilderness vary according to nationality and previous backcountry experience. This suggests that providing a spectrum of wilderness recreation opportunities is needed to meet the diverse visitor preferences and that wilderness sites must be managed to provide stated qualities of experience about visitor activities, facilities, and services. This, however, requires that the various qualities of wilderness experience be available at a wide range of recreational settings to allow tourists to achieve wilderness experiences that reflect their wilderness expectations. **IJW**

Figure 1—Wilderness Purism Scores by Visitor Nationality (Mean Scores in Parenthesis)



The most nonpurist of visitors, in terms of the wilderness images held, were Japanese and Israeli, with 91.7% and 80.0% of respondents from these nations respectively scaling as "nonpurists" or "neutralists."

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Please see **HIGHAM** on page 45.

Wairaurahiri Beach, Waitutu. The remote Waitutu coastline stretches along the southern shores of Fiordland. This is one of the wildest parts of New Zealand, separated from Stewart Island by the stormy seas of Foveaux Strait. Photo by Les Molloy.

RESPONSE TO ECOLOGICAL MANIPULATION IN WILDERNESS" BY DR. DAVID N. COLE

BY BILL WORF

THIS IS IN RESPONSE TO THE THOUGHT PROVOKING PAPER BY DR. DAVID N. COLE in the May 1996 (vol. 2, no. 2) issue of the *IJW,* entitled "Ecological Manipulation in Wilderness—An Emerging Management Dilemma." I agree completely with Dr. Cole's conclusion that"... in the near future, management action (or inaction) will increasingly exert a significant influence on the long-term value of wilderness. Managers may continue to allow wilderness conditions to diverge from a pristine state by electing not to pursue active manipulation. Or they may compromise our future ability to monitor the effects of human actions by intentionally manipulating the last of our wildlands. Neither option is attractive. Clearly there is need for active restoration in wilderness management, but its extent and magnitude needs to be more intensely debated." I agree that debate on this issue is long overdue. However, I do not agree that The Wilderness Act gives managers three conflicting goals.

Dr. Cole says "One goal is to preserve lands 'in their natural condition' (section 2[a])." Actually there are three parts to section 2 [a]. First, it states the reason why The Wilderness Act was needed—"In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition." This simply recognizes "natural condition" as something that was being lost as a result of occupation and modification.

Second, it establishes congressional policy "to secure for the American people of present and future generations the benefits of an enduring resource of wilderness. For this purpose there is hereby established a National Wilderness Preservation System ... ."

Finally, The Wilderness Act establishes the goal for wilderness managers when it says that wilderness areas "shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness" (emphasis added). It is important to emphasize that the goal is not to maintain and/or restore the "natural (pristine) condition" but instead to preserve "their wilderness character."

The Wilderness Act defines wilderness character (section 2 [c]) ideally"... as an area where the Earth and its community of life are untrammeled by man ... ." However, Congress knew that striving for "ideal" wilderness was not a realistic goal. Therefore it qualified the goal by saying that,

> wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of mans work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation ....

At this point it is important to note that wilderness established by this Act is to be "protected and managed so as to preserve its natural conditions." The phrase natural condition (singular) would imply "pristine." Little if any land in the United States can be called truly pristine. However, all wilderness areas will have one or more conditions (plural) that are natural or close to natural. Congress said in effect, preserve those conditions that are natural. This was the foundation for the "nondegradation policy" adopted by the U.S. Forest Service.

This interpretation of section 2 [c] is supported by legislative history. The 1963 Congressional Record (House page 20,352) quotes Congressman John Saylor in a section by section explanation of H.R. 9070. He said:

> Section 2[b] (in the final version this became 2[a]) defines wilderness in three sentences. The first states the nature of wilderness in an ideal concept of area where the natural community of life is untrammeled by man, who visits but does not remain. The second sentence describes an area of wilderness as it is to be considered for the purposes of the Act—areas where man's works are substantially unnoticeable, where there is outstanding opportunity for solitude or a primitive or unconfined type of recreation and where there may also be ecological, geological, or other features of scientific, educational, scenic, or historical values ....

Dr. Cole confers that "The third goal is to provide a variety of public benefits that derive from use of wilderness—the public purposes of recreational, scenic, scientific, educational, conservation, and historical use (section 4[b])." He misreads this portion of the Act. Congress recognized that human use (of any kind) would tend to impact on the "ideal" or "pristine" concept of

wilderness. At the same time wilderness areas are established for the use and enjoyment of the American people as wilderness. Framers of The Wilderness Act crafted section 4 to provide administrative guidance. Section 4 does not provide "goals." Instead, it identifies those activities that are appropriate in the "use and enjoyment" of wilderness and establishes some limitations. Section 4[a] tells managers that they cannot ignore the basic purposes for which national forests, national parks, and national wildlife refuges were established; 4[b] lists those uses that are generally appropriate in wildernesses; 4[c] lists those uses that are inappropriate and generally prohibited; and 4[d] gives guidance for those non-conforming uses that represent compromises necessary to get the legislation passed. Returning to section 4[b], it tells the administrator that s/he shall generally allow "recreational, scenic, scientific, educational, conservation, and historical use" but first it reminds administering agencies that they are "... responsible for preserving the wilderness character of the area and shall so administer such area for such other purposes for which it may have been established as also to preserve its wilderness character." This admonition applies to recreational, scenic, scientific, educational, conservation, and historical use as well as to the purposes covered in 4 [a].

The Goal of Wilderness Management

All this proves that administrators have only one fundamental and overriding goal: "to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness." I believe Congress recognized that ideal or pristine wilderness was disappearing rapidly, but it did not direct managers to attempt the impossible task of trying to re-establish a "pristine" condition. However, administrators must aim to come as close to the ideal as is feasible while still complying with the provisions of section 4. To put it another way, the Earth and its community of life must not be further trammeled if this can be avoided. As Dr. Cole said this will be most difficult on the smaller wilderness areas. The challenge of allowing fire to play its natural role is a case in point.

There are some pervasive changes caused by external factors that wilderness managers are powerless to control or undo, such as ambient air pollution or global warming. Beyond this, the wilderness exists to provide benefits, to be used as wilderness. This means some modification is unavoidable, but management of these primary wilderness uses must seek to hold the impact this use will have to the lowest possible level. The specifically excepted, nonwilderness uses must be side benefits. Manipulating natural ecology deliberately to enhance human uses is unacceptable.

Manipulating natural ecology deliberately to enhance human uses is unacceptable.

The short-term effects of some of this type of manipulation might be "substantially unnoticeable," and might enhance recreational use. But this is still no basis to take deliberate action that will modify natural processes. These sorts of modifications would impair the scientific and educational use and enjoyment of the wilderness. The qualifications on pristine wilderness in section 2 [c] of The Wilderness Act must be viewed as an acceptance of unavoidable modifications, not as an endorsement of deliberate change. Nature is amoral, and in wilderness we allow it to be itself.

There are no "good" or "bad" species or changes in nature, only by human standards related to particular uses. Elk may diminish and pine squirrels increase as a result of natural processes; if so, in a wilderness, we watch it happen, and some sorts of recreational use will suffer. In another time or place, elk numbers may boom and related uses will benefit. Wilderness use, whether recreational or scientific, takes the wilderness as it is. It can't do anything else and be wilderness use. Experiencing, contemplating, studying the uncontrolled ecosystem and facing the challenge and adventure of traveling and living without structural or mechanized aids, with a liberal dose of solitude, and with only what you can take with you, is the "wilderness experience." There will often be better places than wilderness to catch fish or see elk, where management is directed to optimize these opportunities.

Summary and Conclusions

Managers are not faced with conflicting goals. There is no mandate for managers to attempt to achieve a pristine condition. There is no mandate to optimize recreational, scenic, scientific, educational, conservation, or historical uses. There is a mandate to allow natural processes to operate freely to the extent possible. Manipulation should generally be limited to those minimum actions that will establish conditions that will allow natural processes to hold sway once again. Restoration involving reducing the noticeable evidence of human works (except for some historically significant works) should be given high priority Any suggestion for large-scale restoration of the ecological component of the wilderness character must be approached with extreme caution. It would likely conflict with the overriding mandate to back off and allow the untrammeled flow of natural processes. Perhaps the greatest challenge managers face is to resist the human urge to manipulate. They must adopt a posture of humility and respect toward wildness. Dr. Cole's quote of Frank Egier, "Ecosystems are not only more complex than we think, but more complex than we can think," underscores this need for extreme caution. Humans are not now, and probably never will be, smart enough to reconstruct an ecosystem to exactly what it would have been—"pristine." **IJW**

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WILDERNESS @ INTERNET

Participation of Scientists in the Wilderness Internet Dialog

BY LLOYD QUEEN

IN THE MAY 1996 ISSUE OF THE IJW, Freimund and Queen proposed a conceptual ensemble of audiences that are participating in todays wilderness cyberculture. One group of participants in that multicultural dialog is scientists. As described in that article, much of todays internet resource is oriented to wilderness visitors and on-site users. Many web sites, for example, focus on brief geographic narratives about specific areas, provide landscape snapshots or video image clips from scenic attractions, and preview the essentials of how to plan a trip to the area. It is rare that science, basic or applied, is presented or highlighted on wilderness web sites.

Users who browse wilderness sites may seek specific information on issues of interest (e.g., charismatic mega fauna or threatened and endangered flora) that inhabit an area. In some cases, scientists working on those issues may be able to provide the in-depth and factual information that more directly meets the needs of a web visitor. An added dimension of the internet is as a forum for sharing the results of scientific research with audiences that rarely are reached through conventional outlets (e.g., peer-reviewed literature). Access to the results of scientific investigation is all the more compelling given the advocacy and intervention dialog that permeates much of the World Wide Web. Review of issues such as biodiversity and sustainable development and use begs the need for access not only to opinions and editorials, but also to web-based wilderness databases.

During an afternoon spent looking for integration of science into wilderness web sites, I was surprised at the lack of participation by scientists with an ecological or biological perspective. The prevailing voice of science is strongly that of the recreation resource scientist. Other science disciplines are virtually absent as participants in this forum. A notable exception is the National Wilderness Inventory site supported by the Australian Heritage Commission (URL: http:// www.erin.gov.au/newsletter/n22/erinyes_22_NWI.html). This site is unique in comparison to other sites reviewed in this column (see vol. 2, no. 3, pp. 34-35), yet provides a number of powerful examples for how scientists, and the data and information that they generate, can be integrated into the web wilderness dialog.

The site begins with a short, text-based overview of the National Wilderness Information (NWI) program and its sponsors. The inventory involves landscape-scale data. This consistency allows an overall picture of the status of wilderness areas to be assessed. A weak point is the lack of legends on the browse maps. There is, for example, a continental-scale map of "wilderness quality," but no immediate access to metadata that describes how "quality" is determined. The banner line that tops the web page links the user to powerful, streamlined search engines that let the browser surf the site efficiently. These engines support topical or taxonomic searches of a number of federal, state, and territorial databases. Users can specify geographic constraints on the thematic data that they search, and both policy and metadata documentation for all databases is provided on the site, although it is housed under a separate database item. The companion technologies of database management systems (ORACLE), Geographic Information Systems, and remote sensing are also integrated into the site. These tools allow users to perform structured thematic and spatial queries. Access to white papers on policy and public participation, budgetary statements, and media releases are also presented in chronological format.

Overall the NWI site is a unique offering to the wilderness internet user. Limited use of graphics and a structured, systematic design offer outstanding performance and user support. Notably, the site allows scientists to offer as well as access databases on critical issues. The data format and content standards documented at the site ensure comparatively easy access, and allow the user to determine potential efficacy of the data before it is downloaded to the local site. This model is very similar to the effort underway in the United States to develop a National Spatial Data Infrastructure (NSDI) through the Federal Geographic Data Committee (FGDC) (see URL: http:// www.fgdc.gov/ for more information). The NSDI encompasses policies, standards, and procedures for organizations to cooperatively produce and share geospatial data. The FGDC has assumed leadership in the evolution of the NSDI in cooperation with state and local governments, academia, and the private sector. The data sharing capabilities as demonstrated by the NWI site are critical to an enhanced role in and participation by scientists. **IJW**

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WILDERNESS—DIFFERENT CULTURES, DIFFERENT RESEARCH NEEDS

Comparing Conflict Research Needs in Finland and the United States

BY LIISA KAJALA AND ALAN E. WATSON

Abstract: Among the highest priorities identified for wilderness management and research in Finland is the conflict between different wilderness interest groups. Finland's unique land use history is reflected in its wilderness legislation. A significant difference between U.S. and Finland wilderness issues is how each has prioritized research on conflict issues. In Finland, conflict occurs between recreationists coming from distant locations and local people with local subsistence orientations toward the area, whereas in the United States, the most common conflict that has been studied, and managers struggle to address, is between members of different types of recreation groups. These differences in focus on wilderness conflict have important implications for future research.

THE NEWLY DRAFTED FINNISH WILDERNESS RESEARCH PROGRAM (FWRP) cited conflicts between different interest groups (e.g., reindeer herding, forestry, recreation, mining, fishing, and hunting) as one of the highest priorities for research in the Finnish wilderness system (Sippola, et al. 1995). Since a major goal of the FWRP is to develop international cooperation in examining priority wilderness issues, in this paper we (1) compare and contrast the Finnish wilderness system with the older wilderness protection system in the United States, in order to (2) seek guidance for wilderness conflict research in Finland.

A Comparison of the Two Wilderness Systems

The U.S. National Wilderness Preservation System (NWPS) was established in 1964, but the Finnish Wilderness Act was not passed until 1991 (Eramaalaki 1991). There has also been research on conflicts between wilderness recreationists in the United States for several decades. For example, there were early studies of conflict between canoeists and motor boaters in the Boundary Waters Canoe Area in Minnesota (Lucas 1964), a study of the historical and continuing conflict between hikers and horse users across the United States (Watson and Kajala 1995), and more recent research on conflicts between nontra-ditional users, such as llama packers, and other recreation visitors (Blahna, et al. 1995). While there has been a recent effort to more deeply explore the contributors to recreation conflict in additional recreation contexts, there is also a challenge to expand this research beyond on-site, interpersonal recreation conflict issues (Watson 1995).

The different land use histories and wilderness legislation lead to several differences between the Finland and the U.S. wilderness systems, with implications for differences in conflict research needs. The twelve existing Finnish wilderness areas were established, primarily in the remote north, "to preserve the wilderness character of the areas, to protect the Sami culture and the traditional subsistence use of the areas, and to enhance possibilities for multiple-use of nature" (Eramaalaki 1991). Thus, Finnish wilderness areas are a transition type of nature protection area between national parks, other strict nature conservation areas, and commercial land (Tynys 1993). This allows the wildernesses to be large in their surface area, but on the other hand leaves the arena open for several controversies. For instance, small-scale logging operations are allowed in certain portions of some Finnish wilderness areas.

Article coauthors Liisa Kajala (top) and Alan E. Watson (bottom).

U.S. wildernesses were established to preserve areas"... where the Earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain ... ." (U.S. Wilderness Act). Because of the more severe restriction on human presence in wilderness, the situation in the United States is quite different from Finland. U.S. wilderness areas are more strictly protected from human influence than are national parks, which in the United States usually include roads and

Snowmobiling is allowed on marked routes in Finnish wilderness areas. Locals are allowed to snowmobile outside marked routes. This picture is from the highest point in Finland, Haiti, 1,328 meters above sea level in the Kdsivarsi Wilderness. Photo by Arvo Olli.

commercial services. Therefore, in many cases wilderness areas have also been established within U.S. national parks, among other things to keep certain areas roadless. In Finland this kind of dual protection is not necessary because in the Finnish national parks, construction of new roads is generally prohibited and other uses are also more strictly controlled than in the Finnish wilderness areas.

Something similar to the legislatively protected wilderness areas within U.S. national parks exists in larger northern Finnish national parks. In Finland there are several management regions within each park, one of the most remote being called a wilderness zone. However, the reasons for administratively protecting these zones in Finland differ from the reasons for legislative protection within U.S. national parks. In Finland, the wilderness zones within national parks have been established in places with comparatively less recreational use and therefore more wildernesslike conditions prevail. Consequently, less regulation is also needed in these zones, thereby providing recreationists with a less regimented experience. This system is possible as long as only a few people are interested in going to these regions. In the United States it is sometimes quite the opposite; wildernesses within national parks are often very popular and use patterns are sometimes strictly controlled.

Comparing Use in the Two Wilderness Systems

Because of the historical land use background and consequent legislation, a broader range of activities is allowed in Finnish than in American wilderness areas. In general, there is less nonlocal recreational use in Finnish wilderness areas than in U.S. areas. Because of their remote locations, the amount of single-day visits to Finnish wilderness areas remains low compared to the United States. On the other hand, Finnish national parks start right at the roadside and therefore get high day-use numbers. Thus, a couple of Finnish national parks with wilderness zones receive substantial recreational use, though most of it is single-day use.

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Because wildernesses in both countries tend to be located in harsher climates, recreational use is usually highly concentrated in relatively short seasons. For example, more than 80% of the recreational use of Kasivarsi Wilderness Area occurs in four months: April-May (46%) and July-August (36%) (Enojarvi 1996).

An apparent difference exists between users of the two systems in the level of dependence on human-created trails. Off-trail hiking appears to be more common in Finland than in the United States. This might be due to the fact that, for the most part, Finnish wildernesses are located in fairly easy hiking terrain and therefore there is little need to establish trails. In both countries, picking berries and mushrooms is popular and requires one to leave trails, but in the United States trails are more likely to access wilderness features such as lake basins, scenic vistas, and mountain streams. In Finland, people—especially foreign visitors who often find it difficult to orienteer in terrain without major landmarks—are beginning to express desires for more established trails.

In northernmost Finland, where all of the Finnish wilderness areas are located, local people depend heavily on wilderness areas for their traditional sources of livelihood (e.g., reindeer herding, hunting, fishing, and berry picking). Therefore, one of the main reasons for establishing these wilderness areas was to secure future access to these traditional resources. The native Sami culture is tied closely to reindeer herding and other nature-dependent sources of livelihood. Thus, these areas are of substantial importance to local people, not only economically, but socially and culturally too.

The Finnish Wilderness Act recognizes the value to local people of protecting these wild lands from uncontrolled development. To these people, however, there is not such a concept as "wilderness" as described in the legislation. This is especially the case with the Sami people, who historically have considered the wildlands as their home because they roamed these areas with reindeer herds. The local people traditionally just go "to the mountains" or "to the forests," while "wilderness" is a more popular concept amongst nonlocal recreationists (Hallikainen 1993).

In the United States, only recently have accurate perceptions of trends in human use of wilderness and user characteristics been documented. Recreation remains the largest use of wilderness (or at least the most studied/reported on) and the types of recreation activities pursued in wilderness have remained roughly the same for many years. Total recreational use of wilderness in the United States has steadily increased since passage of The Wilderness Act in 1964. Most wildernesses are experiencing growth in visitation, even though many experienced a period of declining use during the 1980s (Cole 1996). Visitors seek opportunities the wilderness offers to enjoy nature, solitude, and self-renewal. Wilderness managers and the public alike, however, are beginning to focus more on values beyond the purely recreational use of wilderness. What Americans value about wilderness, in addition to what they do in wilderness, should guide how it is described and managed. To date, most studies have focused on recreational use of wilderness, but now more interest is being displayed by scientists in studying relationships between humans and nature.

In the United States there was often local objection to establishing wildernesses because that would restrict logging or mining, important sources of revenue for many rural communities. Thus, some exceptions for mining as well as cattle grazing, airstrips, and irrigation water impoundments, were written into U.S. wilderness legislation to accommodate historic uses for some areas in the West.

More commonalties are found between Finland and Alaska. In Alaska, some aboriginal people live close to wilderness areas and conflicts between recreation and subsistence uses of wildland resources are a significant issue. Moreover, legislation that added Alaska wildlands to the NWPS allowed several exceptions to accommodate native peoples dependence on these lands.

Implications for Wilderness Conflict Research and Management

In Finnish wilderness areas, conflicts occur most often between recreationists and local people with subsistence orientations toward the area. The fact that, generally, less recreation occurs in Finnish wilderness areas, reduces the potential for conflict between user groups. The U.S. wilderness legislation is much more restrictive of human presence than the Finnish one, thereby reducing the potential for some conflicts encountered in Finland. This reflects a basic difference between the Nordic and American land management cultures. The abundance of resources in the United States has led to more segregative land management practices, whereas Nordic countries, with a longer habitation history and smaller land base, have established a more integrative approach (Sievanen and Knopp 1992; Stankey 1995). The current trend in the United States, however, is toward more integrative approaches to natural resource management. The ecosystem management approach adopted by federal land management agencies and some private industries in the 1990s is a strong motivator for greater integration of science and management disciplines and implies a need for broader understanding of conflicting demands on all natural resources.

Some conflicts do occur between recreationists in Finland (Saarinen 1995), and this conflict needs research to direct management, but the greater problem is reports of recreationists disturbing traditional sources of livelihood and the reverse—traditional users' activities interfering with recreation pursuits (e.g., conflicts between skiers and snowmobiles operated by subsistence users in their work). Some recreationists question whether snowmobiles or All-Terrain Vehicles (ATVs) are appropriate. On the other hand, some reindeer herders are concerned about the relatively new appearance of recreational dog sledding in areas where it had not existed previously. They are afraid of the impact these dogs and this activity may have on their reindeer herds.

Consequently, in order to focus on the issues surrounding conflict in Finnish wilderness, research needs to be of a different scope than what it has traditionally been in the contiguous United States. An approach to studying conflict is needed that encompasses even the most indirect human conflict, such as the conflicts between reindeer herders and tourism entrepreneurs, and their associated differences of opinion about the desirability of promoting tourism in the region. For example, in Kasivarsi Wilderness Area and UK National Park in Finland these are important issues.

As conflict studies are developed in Finland, commonalties between the mixture of wilderness uses in Finland and Alaska should be kept in mind. Cooperative studies in Finland and Alaska could be particularly fruitful because they would be truly crosscultural, with several cultures involved, and not just international.

Research methodologies must be developed and tested to address the specific conflict issues in Finland. Watson (1995) has suggested that in conflict research only recently has there been an effort to look at social conflict, differentiating it from the more traditional interpersonal conflict issues. There is a need to understand and describe social conflict, values conflict, and social acceptability, yet we are still largely using psychometric measurement methods in most conflict studies.

Among Finnish recreationists it is becoming increasingly popular to access wilderness by nontraditional methods, such as by airplane. Photo by Teppo Loikkanen.

Research methods developed for studying the contribution of personal and social meaning differences to conflict (Brandenburg and Carroll 1994; Gibbons and Ruddell 1995; Williams 1993) may have particular application potential in the Finnish context. These studies are likely to be more qualitative, focusing less on recreation motivations and more on the relationships people have with the landscape.

In terms of selecting conflict management techniques, recent American research on the impacts different techniques have on visitor experiences (Asp, et al. 1996; McCool and Lime 1989) is likely to be important also in Finland. Traditionally, management options have been described as direct or indirect based upon the levels of management presence, with the belief that the less visible management is, the less impact the technique has on visitor experiences. This impact has been recently measured and described as obtrusiveness. However, for some conflict situations it can be that more direct approaches to management may be the least obtrusive to those involved. This question remains to be addressed for situations involving diverse user groups such as in Finland wilderness. **IJW**

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ANNOUNCEMENTS AND WILDERNESS CALENDAR

Helicopter Plan Still Hovers Over Tongass Wildernesses

The U.S. Forest Service (USFS) hasn't backed off its plan to establish 129 helicopter landing sites in 12 wildernesses on the Tongass National Forest. Wilderness Watch has been joined in opposing the proposal by the Department of Interior and by former Interior Secretary Cecil Andrus. As interior secretary, Andrus led the Carter administrations efforts that led to designation of most of the wilderness in Alaska. He stated in a letter to the USFS that its plan will "actually remove these lands from a technical 'wilderness' classification." In a very strongly worded letter, Assistant Interior Secretaries Bob Armstrong and George Frampton urged then USFS Chief Jack Ward Thomas to "withdraw the idea from consideration altogether." They noted the dangerous precedent for wildernesses elsewhere, and the damage helicopters pose to the wilderness's wildlife and recreation values. (Excerpted from *Wilderness Watch,* Current Issues Update.)

Al Gore Talks Wilderness in South Africa

U.S. Vice President Al Gore spent five days in South Africa for meetings of the U.S.-South Africa Binational Commission, which he jointly chairs with Thabo Mbeki, deputy president of South Africa. The longest single meeting with a private citizen was a two-hour stint with Dr. Ian Player, founder of the WILD Foundation, The Wilderness Leadership School, and the World Wilderness Congress. They met at Tshongweni, just 30 minutes outside Durban, one of the premier "urban wilderness" initiatives in the country. Wildland trails, reintroduction of African wildlife and big game, and wilderness education and training were on the agenda, in addition to the cultural and psychological importance of wilderness areas. Vice President Gore clearly understood the need for rugged, wildland type areas close to cities, to make them accessible to the people from the townships and urban areas who otherwise would never understand the importance of wilderness. Two days later, when the vice president addressed a state gathering in Capetown, he referred to his time at Tshongweni with Dr. Player as of singular importance and interest to him, and for the future of South Africa.

The Problem with Roads

Two generations ago, there were no highways in the Yukon. Now, more than 5,000 kilometers of roads, and at least another 5,000 kilometers of vehicle access routes have left a spaghetti pattern across many parts of the territory.

These roads and associated developments have brought benefits to some, but at what cost? Wildlife populations in parts of the southern Yukon are already at risk, much of it

due to overhunting from increased road access.

Historically, we have viewed roads as progress, as keys to economic development. The Yukon government has often financed roads into remote wilderness areas; even when mineral development potential has not been proven, they just want to "open up the country." This "roads to nowhere" notion is a death sentence for wildlife and for wildlands. The real costs of random and unnecessary road building are rarely thought about. Roads can (1) fragment wildlife habitat and cause the decline of some species; (2) create barriers to the movement of some wildlife species, such as caribou and grizzly bears; (3) encourage overhunting and poaching, which leads to more management costs and ultimately intervention in the ecosystem; (4) result in road kills of wildlife (e.g., in the southern Rocky Mountains road kill is the leading cause of death for many large mammal species such as wolves); and (5) spur more road building and further access by All Terrain Vehicles. (Excerpted from Yukon Wildlands Project, winter 1996-1997.)

University of Idaho Has New Wilderness Publications

New publications available from the University of Idaho, Wilderness Research Center include:

> *Studies on the Use of Wilderness for Personal Growth, Therapy, Education, and Eeadership Development:* An Annotation and Evaluation. By Greg Friese, J. Taylor Pitman, and John C. Hendee. 1996, paperback, 103 pp., $30.00.
>
> *Directory of Wilderness Experience Programs.* By Gregory Friese. 1996. Paperback, 34 pp., $5.00.

Either publication can be ordered from the University of Idaho, WRC, CFWR Room 18A, Moscow, ID 83844-1144, USA. Telephone: (208) 885-2267; e-mail: wrc@uidaho. edu.

Bobby Unser Cited for Wilderness Trespass

IJW congratulates the USFS for hanging tough and issuing a citation to Bobby Unser for trespassing in the southern San Juan Wilderness with a snowmobile. Unser and friend Robert Grayton were snowmobiling and got trapped by a blizzard, spending two nights stuck in the wilderness (*USA Today,* 1/10/97).

Jasper National Park

Cardinal River Coals Ltd. is proposing construction of a strip coal mine in important grizzly bear habitat adjacent to Jasper National Park. A large percentage of the coal from this mine is slated to be shipped directly to Japan. The Western Canada Wilderness Committee (WCWC) Alberta was the first group to publicly raise the alarm about this proposed development and has produced a short video on mountain parks with supporter Lee Godby Armed with some graphic posters, WCWC Alberta campaigner Gray Jones traveled to Japan in November 1996 to let the Japanese people know that development of this coal mine will not only be damaging to our threatened grizzlies but will also impact their ability to enjoy Jasper National Park as a tourist destination. E-mail information: wcwcab@web.net. (Excerpted from WCWC Educational Report, winter 1996.)

Disability Accessible Wilderness Horse Camp

The Backcountry Horsemen of Washington State—Cascade Horse Club Chapter in cooperation with the Wenatchee National Forest over the past five years—has now made the Chiwawa Horse Camp completely accessible for disabled horseback riders. In August 1996, Equi Friends "Riding Program for the Disabled" held their first trail ride at the camp. For information, call Equi Friends at (360) 568-4183. (By Ann Lange, Chair, Backcountry Horsemen of California.)

Excellent Reading Opportunities

A Short History

From the Forest Preserve of New York State in the Adirondack and Catskill Mountains comes this 40-page booklet describing the origins of the "forever wild" forest and its constitutional protection ($6). Also available, Forest and the Law, an in-depth, illustrated examination of the constitutional and legislative record surrounding the forest preserve ($3). Contact the Association for Protection of the Adirondacks at (518) 377-1452. (Excerpted from *Taproot,* fall 1996.)

The World of Wilderness: Essays on the Power and Purpose of Wild Country

Edited by T. H. Watkins and Patricia Byrnes, this collection of essays published in Wilderness magazine attempts to illuminate the role of wilderness in American life. Proceeds benefit The Wilderness Society. (Excerpted from *Taproot,* fall 1996.)

Yellowstone Bear Tales

Edited by Paul Schullery, this narrative presents a rich and varied cross section of early encounters with the parks most famous wild residents. (Excerpted from *Taproot,* fall 1996.)

Wilderness Discovery Program Featured in ABC Documentary

On January 23, 1997, the ABC television network ran "Miracle at Trapper Creek," a one-hour documentary about the Trapper Creek Job Corps Center and the Wilderness Discovery Program. Wilderness Discovery is a seven-day backpacking program for youth at risk that was developed and tested for the Job Corps by the University of Idaho Wilderness Research Center. The 44-minute video is available from the University of Idaho Wilderness Research Center and shows how a wilderness experience supplements the development of socially and economically disadvantaged young people in the nations premier job training program, the Job Corps. For information call (208) 885-2267.

Snowmobiles Cause Air Pollution

According to the California Air Resources Board, the fumes from 1,000 snowmobiles—typical on an average winter day

at Yellowstone National Park—are equal to the total nitrous oxide and hydrocarbon output of 1.7 million automobile tailpipes. (Excerpted from Coalition for Education in the Outdoors, April 1996.)

WCWC Alberta's "Save the Grizzly" Campaign

The Bow Valley that runs through Banff National Park is a 4-kilometer-wide migration corridor for ungulates and large carnivores, including the grizzly This corridor also contains the Trans-Canada Highway Highway 1A, the Canadian-Pacific rail line, an airstrip, a 27-hole golf course, three ski resorts, the village of Lake Louise, and the town of Banff, population 7,500. The highways and railroad have led to extremely high bear mortality rates. Reducing the road/rail speeds is one objective of the Western Canada Wilderness Committee (WCWC) Alberta's "Save the Grizzly Campaign." WCWC is also campaigning to stop poaching and hunting and vastly increase habitat protection. E-mail information: wcwcab@web.net. (Excerpted from WCWC Educational Report, winter 1996.)

Employment Resources

The Job Seeker is published twice monthly, specializing in the natural resource and environmental fields nationwide. Contains listings ranging from internships to senior executive positions. Editors are seeking vacancies from employers also. For more information, contact The Job Seeker at Route 2, Box 16, Warrens, WI 54666-9501, USA. Telephone: (608) 378-4290.

AEE (Association for Experiential Education) Jobs Clearinghouse is published monthly and gives up-to-the minute information on available jobs and internships, primarily in adventure and environmental education. For more information, contact AEE Jobs Clearinghouse at 2305 Canyon Boulevard, Suite 100, Boulder, CO 80302, USA. Telephone: (303) 440-8844.

Wilderness Job Referral Service. Wilderness Education Association, Department of Recreation Resources, Colorado State University Fort Collins, CO 80523, USA. Telephone: (970) 223-6252; e-mail: wea@lamar.colostate.edu. (Excerpted from Coalition for Education in the Outdoors.)

Conservation Directory Available

The U.S. Fish and Wildlife Service, Montana Fish and Wildlife Management Assistance Office, has compiled a national directory of Native American Conservation Departments. Each listing describes an active tribal conservation program. A resource such as this may be useful to many parks and other land managers in establishing contact with tribal liaisons regarding conservation issues and goals on adjacent federal and tribal lands. Contact Joe Early at (406) 585-9010 in Bozeman, Montana, for a free copy (Excerpted from *Park Science*.)

Yukon Wildlands Project

The Yukon Wildlands Project is part of a North America-wide strategy to stop the disappearance of wildlife and the wild places upon which they depend. In every region of the continent, grassroots organizations are working to preserve vanishing biological diversity In Canada, the Endangered Spaces campaign, led by the World Wildlife Fund, aims to set aside a representative part of each natural region by the year 2000. The Wildlands Project and the Endangered Spaces Campaign go hand in hand. The Endangered Spaces Campaign is a key part of the Yukon Wildlands Project as it focuses on core protected areas. The Wildlands Project aims to ensure that those core areas are connected to healthy ecosystems, and that the Yukon wildlands remain wild. The Yukon Wildlands Project and the Endangered Spaces campaign are a cooperative effort of three environmental groups in the Yukon: CPAWS-Yukon, (Telephone: [403] 668-6321), the Yukon Conservation Society (Telephone: [403] 668-5678), and Friends of Yukon Rivers (Telephone: [403] 668-7370).

U.S. Legislative Action

U.S. Representative Jim Oberstar (D-MN) and Senator Rod Grams (R-MN) introduced legislation to dramatically increase motorized use of the Boundary Waters Canoe Area Wilderness (BWCAW), and to shift management of the BWCAW and Voyageurs National Park to a council of local politicians. Oberstar's legislation would have opened the Boundary Waters to trucks and jeeps, and expanded the waters where motorized use is allowed by 50%. Congressman Bruce Vento (D-MN), a strong wilderness advocate, introduced a counter-measure to increase protection for the million-acre BWCAW by closing parts of three lakes (Basswood, Loon, and Lac La Croix) that are currently open to motorized use.

U.S. Representative Wes Cooley (R-OR) pushed legislation to reduce the boundary of Hells Canyon Wilderness in order to allow for a road onto the Hells Canyon rim. The excluded lands are part of a migratory corridor for bighorn sheep, elk, and mule deer. The proposed road would access one of the few unroaded areas on the western rim of the canyon.

The Emigrant Wilderness was threatened by legislation introduced by Rep. John Doolittle (R-CA) that would have required the USFS to restore and permanently operate a number of flow regulation dams on lakes in the High Sierras. The draft Emigrant Wilderness management plan proposed eliminating several of the dams. Wilderness Watch has argued that all of the dams should be removed or allowed to naturally deteriorate. A handful of local citizens want the dams rebuilt and convinced Doolittle to introduce this bill.

In a parting shot on the last day the Senate was in session, Senator Larry Craig (R-ID), at the behest of Idaho outfitters, introduced legislation that amounts to the first significant amendment to The Wilderness Act in its 32-year history!

Canada's Grassroots Wilderness Advocates

The Canadian Parks and Wilderness Society (CPAWS), founded in 1963, is Canada's national grassroots voice for wilderness. They were built from the ground up by people who care passionately about wildlands and wildlife. Over the years CPAWS has helped protect more than 100,000 square kilometers of Canada's magnificent natural heritage.

They focus on establishing new protected areas, improving the management of existing parks, and on conservation-related legislative and policy reform. They are a progressive, solution-oriented group with 10,000 members. Nine chapters span the country: Yukon, British Columbia, Alberta (2), Saskatchewan, Manitoba, Ontario (2), and Nova Scotia. For more information call CPAWS at (800) 333-W1LD; e-mail: cpaws@web.net; website: http://www.afternet.com/~tnr/cpaws/cpaws.html.

Upcoming Conferences

- **7th International Symposium on Society and Resource Management**
  This biennial symposium from May 27-31, 1998, will focus on the contributions of the social sciences to understanding the environment and resource management. Activities include paper and poster sessions, panel and round table discussions, film sessions, and field trips. Encouraged participants include researchers, managers, academicians, policy specialists, and students interested in the human aspects of resource management. For information contact Dr. Sandy Rikoon, University of Missouri-Columbia, Department of Rural Sociology, Room 108, Columbia, MO 65211, USA. Telephone: (573) 882-0861; e-mail: ssrsjsr@muccmail.-missouri.edu; website: http ://silva. snr. missouri. edu/ issrm.

- **Wilderness Science in a Time of Change**
  Since the first national wilderness research conference in 1985, interest in wilderness has increased, international and societal definitions of wilderness have evolved, and wilderness science has improved. This conference, from May 17–22, 1999, in Missoula, Montana, will present research results and synthesize knowledge and its management implications. Outcomes should include state-of-the-art understanding of wilderness-related research, and an improved understanding of how research can contribute to the protection of wilderness in the 21st century. Anticipate a call for papers and further information later this year. Conference proceedings will be published. For more information contact Natural Resource Management Division, Center for Continuing Education, University of Montana, Missoula, MT 59812, USA. Telephone: (406) 243-4623; e-mail: ckelly@selway.umt.edu.

LETTER TO THE EDITOR

Dear *IJW* Editor:

John Hendees article, "The Sustainability of U.S. Wilderness—Ecologically Socially and Politically" in the December 1996 issue was right on target. My old agency the U.S. Forest Service, has been doing an outstanding job sustaining the first, and a miserable job with the latter two. Social and political sustainability is taking a beating because forest service wilderness managers do not seem to fully understand the values and benefits of wilderness experience and, as a result, the political support of wilderness is being eroded.

Many many potential wilderness visitors are being denied access because they are dependent on outfitter/guides of some kind for a relatively safe visit (novices, senior citizens, youth, and the disabled). Others who wish an educational experience in conjunction with a visit are denied access for the same reason. Outfitter/guide permits are being arbitrarily limited in number and in person/days allowed per permit for wildernesses in areas where there is no overall rationing or need for rationing of visitor use.

The problems are compounded when even tax supported educational institutions (universities, colleges, etc.), tax supported local governments (park and recreation departments, etc.), and nonprofit organizations (museums, nature centers, outings clubs, etc.) are required to obtain commercial outfitter/guide special use permits. These organizations specialize in low-cost wilderness education and experience trips for the aforementioned segments of our population. And they are not commercial under any definition of the word or, for that matter, the provisions of Secretary of Agriculture CFR, title 36, 251.50, special uses, which exempts noncommercial groups from the permit requirement.

By being classified as commercial outfitter/guides, these noncommercial organizations are subject to the limitations and harassment usually reserved for true commercial operators (the rules are excessive even for them). Costs are significantly raised, mainly because of the time required to contend with the bureaucratic nonsense. Leaders and participants who are eventually favored by a trip to a wilderness generally receive a very poor understanding of both the agency and the wilderness concept. Certainly, partnerships in providing quality wilderness education and experience are not fostered by such treatment.

I would like to see some major changes in treatment of both the commercial outfitter/guides and the organizations that I believe are illegally misclassified as commercial. We went through an exercise called the "National Recreation Strategy" in 1986-1988, which I thought would preclude this type of nonsense. Maybe the forest service should revisit their outfitter/guide policies pursuant to the intent of the recreation strategy and make some major corrections.

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BOOK REVIEWS

JAMES R. FAZIO, BOOK REVIEW EDITOR

The Soul Unearthed: *Celebrating Wildness and Personal Renewal Through Nature* edited by Cass Adams. 1996. Tarcher/Putnam, New York. 288 pp., $14.95 U.S. (paperback).*

In the final selection in *The Soul Unearthed,* theologian Belden C. Lane offers a phrase that captures the fundamental theme of this diverse anthology of personal testimonials about wilderness: "We are saved in the end by the things that ignore us." Originating in writings about Buddhist meditation, the phrase is a response to landscapes of vast grandeur in the north of India. In the vast resources of divine disinterest is discovered a freedom and a joy that cut through our temporal entrapments. "The presence of such wild landscapes awakens a silence in us, refreshes our courage with the purity of their detachment."

In the foreword, Elizabeth Roberts ensures us that *The Soul Unearthed* is not "nature mysticism." I would agree with this, although Fred Swinney's (Graywolf) night vision and assimilation of the wolf persona is clearly a mystical transformation. There are many other transcendent junctures at which both author and reader cease to distinguish between "the experiencer and the place." But the selections in the book are "grounded," as Adams says. They are based on the hard truths of physical contact with wild places, the paradox that while wilderness is our evolutionary home, it is intimidating and in some respects alien.

Ironically, *The Soul Unearthed* brings into focus the double-edged truth of the deep ecologists—that we are indeed the equals of the other species of this Earth, and therefore subject to the same ecological mechanisms, sufferings, and incomplete understandings. Intimate contact with wilderness heightens awareness of our earthly frailty, but simultaneously clarifies our essential oneness with the Earth. The 66 selections included here are striking and eloquent testimonials to the heightened consciousness available through intense contact with wild places.

The primary difficulty with this work is one of definition, and I believe Adams would view this assessment as a compliment. It is difficult to know how to use the book. Personally, I began to read the selections, one each day, as guides to my daily meditation. I found many of the selections too conceptually complex for this purpose. As a comprehensive investigation of any of the main topics of the book, however, there is not *enough* depth. Adams hopes that he has provided an anthology that is "solid and accessible." I would describe it as expansive, yet thematically unified. I do not find it accessible, but it is certainly compelling.

As a survey of subject matter, the book crosses many different genres. Several chapters are solidly anchored in deep ecology and ecopsychology and the ideas corroborate (but do not glorify) the principles of deep ecology through the sometimes harsh realities of wilderness experience. Several chapters build on the foundation of the wilderness vision quest experience, with an emphasis on the pan-cultural, physical components of a quest, especially for non-Indian peoples. One chapter builds as well on the men's and women's movements. Adams provides a very centered, eloquent, higher-ground perspective on gender issues that stays completely focused on the connectedness of the human soul with the sacredness of all life. Also included are selections based on encounters with wildlife, such as bobcats, wolves, orcas, elk, and bears. The emphasis here is on the commonalities humans share with wild animals—the insights they bring us into our own animal, yet sacred natures. One chapter addresses ecodefense, but again with the perspective that we are a part of the wilderness, and it is a part of us. John Seed's Zenlike acceptance here is that "if we are destroying the earth, then we are an expression of the earth destroying itself and that's quite a noble task." Whatever it is that is happening is exactly what is meant to happen.

The book also includes a section on wilderness education. I single out this particular perspective as I call myself a wilderness educator and respond to the ideas included with a proprietary interest. Adams takes to task the inquiry method of analyzing and labeling in outdoor education, and he offers in its place an approach grounded in "letting wildlands speak for themselves, with minimal interpretation," as Saul Weisberg puts it. This idea is consistent with the primary theme of the book, that personal wilderness experience becomes the stuff of transcendent earth-centered spirituality. It fits as well in the context of educational programming as it does as a lens for understanding vision questing or wildlife encounters. It is also, however, considered naive in some circles as a pedagogical philosophy. "The Mountains Speak for Themselves" model was predominant in the early days of Outward Bound programs in the United States and has been somewhat superseded by a metaphorical model in which the lessons to be transferred back to the civilized illusion are spelled out ahead of time by the wilderness educator. The question is how well the language of the mountains transfers back to town for certain kinds of students.

But then Bob Hendersons "Thoughts on the Idea of Adventure" perhaps even further advances our now sophisticated

pedagogies in wilderness education. He suggests that "adventure" is coming to truly accept ones place in a grand design at the level of the "comforted soul." The ultimate transference from the wilderness back to civilization is coming to see all the world, including ourselves, as a "wildness."

Indeed, throughout the book there is a recurring realization that "wilderness" itself is an artifact, created out of civilization and artificiality. In the section on ethics, Renee Soule asks the tough questions about the meaning of wilderness: "Can we learn to live with diversity without splitting differences into alienated dualities [like civilization and wilderness]?" She answers yes, by discovering that wilderness is not a separate haven, but a way of seeing life right here, right now, with every breath, every action. Like engaged Buddhism, she says engaged ecopsychology moves us to a place of open awareness and openheartedness to embrace even that which we detest, fear, or wish to ignore. Wilderness is the template for wholeness and health, and life itself becomes a wilderness experience in the fullest sense of the word.

I would not recommend *The Soul Unearthed* to the previously uninitiated. As a survey of concepts about wilderness it teases us (like Emerson's *Nature*) with challenging and timely truths that are frustratingly suggestive in their brevity However, I do believe anyone concerned with the preservation of wilderness in the next century (or life on Earth for that matter) needs to understand the perspectives collected in this unusual work.

*Reviewed by David Cockrell, community development specialist, Colorado State University.

The Lochsa Story: *Land Ethics in the Bitterroot Mountains* by Bud Moore. 1996. Mountain Press Publishing, Missoula, Montana. 461 pp., $20.00 U.S. (paperback), $36.00 (hardcover).

Few people travel the trails of the Lochsa country and remain unaffected by this remnant of wild America—this reviewer included. It is a special place. Its heights form the jagged boundary between Idaho and Montana, partly in the great Selway-Bitterroot Wilderness Area and partly in a disgraceful patchwork of clearcuts where it has been said there are islands of trees amid a sea of roads. Even so, the nonwilderness portion still contains roadless areas, one of which includes the only place in America where the faint trace of Lewis and Clark's route can be experienced under virtually the same conditions encountered by the expedition.

Bud Moore took it upon himself to encapsulate the history of this big country. No one could be better qualified, for here is an author whose 80 years span the entire era of change in the Lochsa. He grew up on a farm in Montana just "over the hill" from the Lochsa River's wild and mysterious tributaries. Trappers made regular stops at the farm, firing young Buds imagination and passing to him the compulsion to spend most of a lifetime among the granite peaks and crystalline waters of the Lochsa country This lifetime included solo explorations of the wild country at age 13, his own cabin and 80-mile trap line at age 18, and a 47-year career with the Forest Service.

Not only does Moore's life span the era from first trappers to women forest rangers, he writes about all with clear insights and literary skill. Had Moore chosen a life holding a pen instead of rifles and Biltmore sticks, he would, in my opinion, rival DeVoto and Stegner. Here's a sample from his boyhood entry into the Lochsa country: "... the trail left the streamside and led me over a low ridge into a rocky draw where I could no longer hear the sounds of water flowing in the Brushy Fork. Twilight deepened. Then something moved in the shadows ahead. He came toward me, not more than thirty feet away. His head swung back and forth near the ground; I saw the short nose, the broad flat face with rounded ears set nearly a foot apart, the big hump on his shoulders, the black hair luminous in the twilight, and peppered with gray on his head, neck, and hump. Grizzly."

Moore came into a land we can hardly imagine today—a land marked only by Indian trails and a few cabins to shelter the solitary trappers. What he left behind is a land scarred and broken, except for pockets of roadless tracts and the wilderness saved through the vision of Bob Marshall and his kindred spirits. Moore's story is a microcosm of land use in the mountain West, first at the hands of white hunters and miners, then the railroad barons, and finally, our government's own rangers. To anyone who knows and loves the land in this story, it can bring tears to read of the slaughter by gun and steel trap of up to 40 grizzly bears each year, of streams once laden with trout suddenly poisoned by DDT spread in the war against spruce budworms, of ageless springs of pure water buried by bulldozers, and of old-growth forests laid bare. "In this place," Moore reflected, "an emptiness spread over the once-vibrant land."

Should the reader be angry at Moore, one of the parade of district rangers who worked shoulder to shoulder with the road builders and loggers? In *Ameriean Environmentalism: Readings in Conservation History,* Roderick Nash wisely counsels, "... rather than shaking moralistic fingers at pioneers, environmental historians would do better to attempt to understand why people acted as they did toward nature."

This is perhaps Moore's greatest contribution. He shows how decisions were made and why. You sweat with firefighters facing what they thought was the forest's worst enemy. You sit in the saddle with Moore in his beloved spruce stand wondering how to stop the damned bark beetles. You try to build roads with little more than a hand level and the whims of a dozer operator. And in the end, you feel the authors frustration and sadness: "In sick fish and in sandbars untraveled by mink lay for me the beginning of ecological wisdom in managing land."

Moore's ecological awakening was ahead of his agency's recent discovery of "ecosystem management." At the end of the book, he stands on a peak studying

the contrast of wilderness and nonwilderness in the panorama before him. Then he visits his 1930 campsite at Elk Meadow where he says the "combined operations of Plum Creek (Timber Co.) and the Forest Service have changed, and are still changing, this once-ecologically diverse land to a utilitarian tree farm." You sense remorse. But more importantly, you can sense hope for current managers— particularly if all were required to read this book—as Moore provides one of the more lucid explanations of ecosystem management.

Looking with the clarity of a backward glance, Moore says at his old campsite: "... what I am feeling is not so much disappointment at the application of science as a wish that ethical matters of the heart and soul were more connected with science by those who manage the Lochsa's lands." And to those stewards, present and future, he offers this good advice: "It is important ... to remember that nature does not extract—it displaces, replaces, and recycles. That's why our approach to managing national forest lands should focus more on what to leave to keep the land whole in the long run than on the bounty to be harvested for immediate use." **IJW**

WILDERNESS EXPERIENCES IN JUNIPER PRAIRIE WILDERNESS

BY ALAN WATSON

Marjorie Kinnan Rawlings described the people, the plants, the bugs, and the animals along Juniper Run (Creek) in her Pulitzer Prize-winning novel, *The Yearling,* including Penny and Jody's encounter with that hog-thievin' black bear known as Ol' Slewfoot. Today Juniper Springs, the place where Jody used to hunt alligators, is a popular picnic, camping, and swimming development on the Ocala National Forest in Florida, giving rise to the "run" as it meanders through the Juniper Prairie Wilderness. Wilderness visitors rent canoes from the outfitter or paddle their own through the maze of cypress trees and palmetto. They see many forms of wildlife, including alligators and snakes, and often must duck under fallen logs. The number of daily permits are limited to protect the solitude experience for visitors.

A team of scientists from Virginia Tech, Clemson University, the University of Illinois, the University of Montana, and the Aldo Leopold Wilderness Research Institute joined in a cooperative project with the Southern Region of the U.S. Forest Service, the National Forests of Florida, and local Forest Service managers to identify important aspects of the experience of today's wilderness visitors that require special stewardship planning. Using qualitative methods, groups were interviewed and stories were recorded for later analysis. While no one actually saw 01' Slewfoot, the importance of interactions with nature (including ducking under those snakey logs and seeing alligators) was clearly the dominating aspect of the experience. These interactions were actually positive at low-recreation use times but were more of a negative element of the experience when more crowded conditions were allowed to occur. Managers are contemplating their responsibility to provide access to recreationists by removing some of these logs and the potential impact that removal may have on the essence of the experience at Juniper Prairie Wilderness. This research project provided managers with information needed to establish a long-term monitoring program at Juniper Prairie to understand the effects of use pressures and things managers do which influence visitor experiences.

Direct questions to Alan Watson, Aldo Leopold Wilderness Research Institute, P.O. Box 8089, Missoula, MT 59807, USA. Telephone: (406) 721-5697; e-mail: fswa/s=a.watson/ou=s22101a@mhs.attmail.com.

MOLLOY continued from page 13.

20 years? I think there are two main reasons. First, many New Zealanders simply take their wilderness for granted. They consider that most of the 29% of the country managed by DOC is, in effect, wilderness, and highly protected through its status as national park, reserve, or conservation land. Second, the Conservation Act of 1987, creating DOC as the management agency, downgraded the importance previously accorded to backcountry recreation. The Conservation Act requires the DOC to foster recreation on the lands it manages, but this has been interpreted by successive administrations as less important than DOC's mandate to conserve indigenous ecosystems and to advocate for conservation in general. Since its creation, DOC has been preoccupied with (1) biodiversity conservation (especially recovery plans for threatened species and the eradication or control of pests and weeds); (2) developing a partnership with Maori tribal groups in the management of conservation lands; and (3) managing the increasing number of international visitors and regulating (through concessions) the use of the conservation estate by the tourism industry. Only with the renewed emphasis provided by the Visitor Strategy exercise of the mid-1990s has the need to protect New Zealand's remaining true wilderness reassumed some degree of its former priority. **IJW**

The author of several books on the natural history of New Zealand, **Les Molloy** is a one-time wilderness mountaineer and longtime advocate for the protection of New Zealand's wilderness. From 1987 Dr. Molloy was a senior technical specialist in visitor services in the head office of New Zealand's Department of Conservation. Since leaving DOC in May 1987, he now works as a private heritage conservation consultant.

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HIGHAM continued from page 29.

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GUIDELINES FOR CONTRIBUTORS

Editorial Policy

The *International Journal of Wilderness (IJW)* invites contributions pertinent to wilderness worldwide, including issues in stewardship, education, research, international perspectives, and inspirational articles. *IJW* also publishes articles, commentaries, letters to the editor, photos, book reviews, and a "wilderness digest" section of upcoming events and announcements.

The *IJW* solicits manuscripts for peer review not previously published or simultaneously submitted elsewhere. Materials revised or reoriented by the author(s) sufficiently to constitute a new contribution are also welcome. In addition, the *IJW* invites feature articles and opinion pieces that will not be peer reviewed (these may include previously published material). Authors are requested to accompany their manuscripts with a cover letter explaining: (a) any previous use of data or information in the manuscript, (b) how the submitted manuscript is different, and (c) that it has not been submitted elsewhere for publication.

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Four Major Article Types

1. Manuscripts. These are both peer reviewed and nonpeer reviewed reports of wilderness-related research, stewardship, international, and education issues presented in a factual manner. It is strongly advised that the results (factual) and discussion (interpretive) sections be kept separate to enhance clarity; sections reporting recommendations and implications are encouraged. Articles must have an abstract of 50 to 100 words, in which objectives, methods, and major findings are clearly summarized. Stewardship, science, and education articles may be peer reviewed prior to acceptance. Photos, with captions illustrating key points in the submitted text, are strongly encouraged.

2. Commentaries. A commentary consists of a reasoned argument culminating in recommendations or proposals for some action (e.g., a research program, a change in administrative procedure, etc.). Narratives should be approximately 500 words and deal with an important wilderness issue. Accompanying photos with captions are encouraged.

3. Special Features. IJW contains special feature sections: The "Soul of the Wilderness" section presents inspirational articles and a proactive voice for global wilderness by notable figures. Nominations of potential "soul" authors or materials are encouraged. The "Wilderness @ Internet" section describes and reviews wilderness-related internet material and feature articles dealing with the implications and use of electronic media for wilderness.

4. Letters, Announcements, and Updates. Letters to the editor, announcements of meetings and important events, photos, administrative policy updates, major personnel changes, and special event information is welcome for the "Wilderness Digest" section.

Style and Form

Manuscripts must be submitted in final form. The author is responsible for accuracy of data, names, quotations, citations, and statistical analyses. Strict economy of words, tables, formulae, and figures should be observed and specialized jargon avoided. Submissions from the United States will use English units, followed by metric units in parenthesis. Submissions from outside the United States will feature metric followed by English units in parenthesis. Usage must be consistent throughout the manuscript. Target length of articles is 2,500 words; shorter articles may be published sooner; longer articles may be rejected for length.

First Submission. Initially, three double-spaced copies of the manuscript should be submitted to the managing editor. All accompanying tables, charts, and photo captions should be included.

Final Submission. Once manuscripts have been reviewed, accepted, and review comments have been incorporated, the final manuscript should be submitted with one computer diskette, clearly labeled with the title and version of standard software (DOS preferred), authors name(s), and document title as it appears on the diskette. Paragraphs must be double-spaced and contain no indentations.

Subheadings are desirable. Article titles should be short and explicit, beginning with a key word useful in indexing. The title, authors name(s), and the abstract should be found at the top of the first page.

About the Author(s): A photo of the author(s), waist up and outdoors should be sent with each final manuscript submittal. At the end of the manuscript please include a two- to three-

sentence biography for each author. This should contain affiliation, location, and contact information, including mailing address, telephone number, and e-mail address (if applicable).

Figures and Tables. If the tables contain any graphics such as pie charts, maps, bar graphs, etc., authors can submit either of the following:

1. A laser printout of the chart along with the manuscript. Authors must make sure all information contained therein is exactly correct. Tables of this nature cannot be edited, they will be submitted to the publisher as camera-ready art.

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Literature Citations. Cite references parenthetically at the appropriate location in the text by author and date (e.g., "Hendee 1995"). List all references alphabetically by senior author, and in chronological order for multiple publications by the same author at the end of the article. Do not use footnotes. Citations should include full name(s) of authors, date of publication, title of material cited, source, publisher, and place of publication. Use corporate titles where relevant. Theses and unpublished manuscripts or occasional papers may be included sparingly.

Illustrations. All photographs, line drawings, maps, and graphs are designated as figures and must be keyed to the text. They should be submitted consecutively numbered and identified with soft pencil on the reverse side. Photo captions should be listed at the very end of the manuscript and keyed to numbered photos. Figures should not duplicate data presented in tables.

Photographs. Glossy black-and-white photos are most desirable. High-resolution color slides and photos are also acceptable. These will be printed in black and white in the journal.

Questions. Direct all correspondence pertaining to manuscripts, including name, address, business phone, fax, and e-mail address of the lead author to: John C. Hendee, Managing Editor, International Journal of Wilderness, University of Idaho, Wilderness Research Center, Moscow, Idaho 83844-1144, USA. Telephone: (208) 885-2267; fax: (208) 885-2268; e-mail: wrc@uidaho.edu.

REMEMBERING SIR LAURENS VAN DER POST

BY VANCE G. MARTIN, EXECUTIVE EDITOR

A CURIOUS ASPECT OF MY TEENAGE YEARS was that I loved nature and wildness, but spent quite a lot of time in the house. To my parents' way of thinking, this was for good reason. It had to do with wildness, but not the wilderness type.

In any event, the excessive time indoors needed filling, so I read a lot—mostly about the outdoors. During one of my involuntary retreats, after rushing through every one of Louis L'Amour's books and learning about the craft of formula writing, I came across a crumpled paperback, *Heart of the Hunter.* I meandered through it and discovered the art of storytelling. Even more, I experienced for the first time someone who could write about what I really felt—the sense and texture of wilderness. I discovered Sir Laurens van der Post.

Laurens left our midst on December 15, 1996, two days after his 90th birthday. A human being of singular character, he was the most complex man I have ever known. Except for the fact that it is a cliché, I would even call him unique. This is nowhere more evident than in the many obituaries that appeared in the major newspapers of the world. Each touched upon that aspect of himself which Laurens had revealed at some time to that particular writer: prolific author, exotic explorer, courageous soldier, profound philosopher, classical scholar, psychologist, champion of forgotten tribal people, friend of the elite, unofficial diplomat, confidant to princes and prime ministers. None of these labels alone do justice to a man who willingly claimed to not even know himself. Yet this claim had little to do with self-knowledge or understanding because, in that respect, Laurens knew himself better than one thought possible. It actually had more to do with a profound personal experience and belief in that which is best described in a line by a poem from his friend, T. S. Eliot: "... knowing myself yet being someone other."

Laurens firmly believed in the "someone other," and this is why he was one of the great wilderness figures of the 20th century. To him, wilderness is more than a collection of wildlife, plants, and naturally occurring processes. It is certainly a template which reveals the proportion and relationship necessary to sustain human civilization—in contemporary jargon, a sort of formula for sustainability, if you will—but it is also at once a mirror that reflects the best of human potential and the worst of human excess and alienation. Even more, it is an environment of hope and healing, where hubris has no place and the now is everything. Most of all, it is the doorway through which we can venture to the interior, and in an unspeakable manner experience the "someone other."

If this sounds a bit far out, it is purposely so: Laurens was a person of profound perspective. Yet this rarified visionary self was well-salted with humor and a quirky appreciation of irony, and

grounded by a rigorous, well-tested discipline. And his many dimensions were strictly compartmentalized, the result of a survival instinct forged through hardship, of which he suffered much in his life. One such extreme experience spawned in him a remarkable capacity to forgive those who trespassed against him, as he did to the Japanese in whose prisoner of war camp he endured three years of hellish abuse and torture during World War II.

But further, when he was freed from the camp, he performed, without a moments hesitation, one of the greatest acts of emotional strength, physical endurance, and mental resilience of which I've ever known. He immediately went back on active duty as a senior officer in Lord Mountbatten's command, as postwar Java came under British rule. Laurens was incredibly tough. He served in this capacity for more than two years, before finally allowing himself a break and returning to Africa. Upon arriving on his native soil, before seeing a single friend or member of his family, he went into the African lowveld wilderness, to spend 30 days healing and rediscovering himself.

In a wonderfully synchronistic event, 15 years after reading *Heart of the Hunter,* I met Laurens when he sat down next to me in the very back row of the open benches at a race track which was the crowded, jostling site of the public opening of the 2nd World Wilderness Congress (Australia 1980). Later that day, Ian Player formally introduced us, after which ensued one of the most memorable nights of my life in which I joined Laurens, Ian and Enos Mabuza (now the chairman of the National Parks Board in South Africa) around the kitchen table of a modest motel in Cairns, Queensland, eating fried chicken prepared by Enos' wife, Esther. We talked late into the night, around the camp fire of an incandescent bulb, and they welcomed my story as one with theirs. Over the next 20 years, the opportunity to work side by side with Laurens in shaping and convening the World Wilderness Congress, and at times being both encouraged and firmly schooled by him, was a great gift from the someone other. Thank you, Laurens.